



National Aeronautics and
Space Administration
Langley Research Center

Educational Product

Students

Grades K-5

EP-2003-12-07-LaRC

ADVENTURES

in aeronautics

COLORING
BOOK!



HEY KIDS!

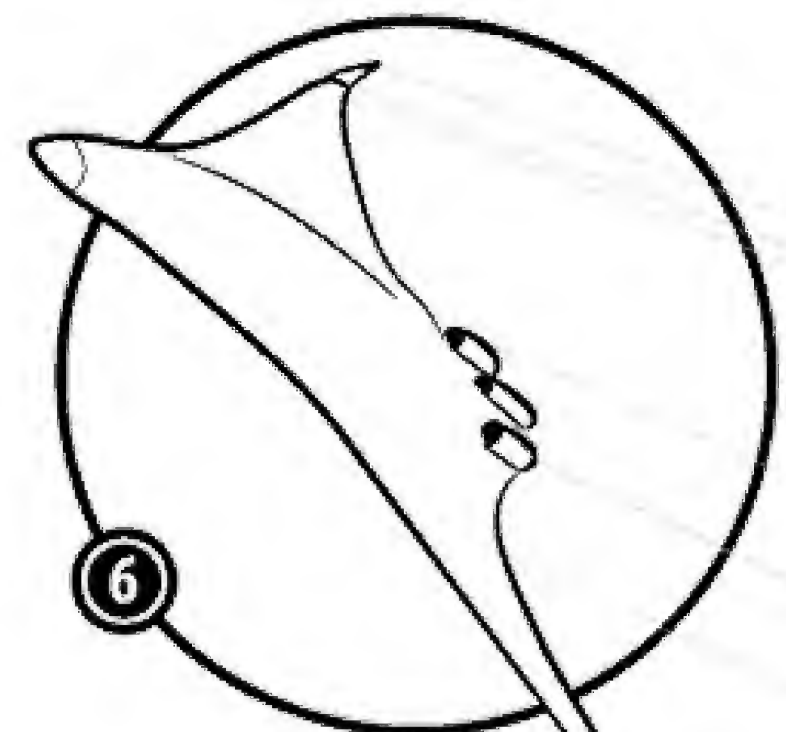
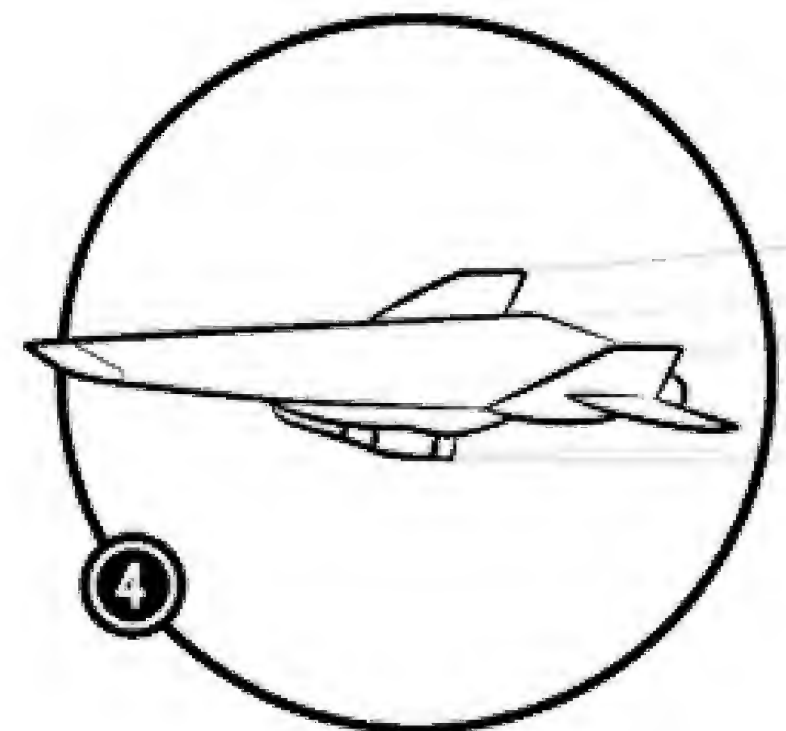
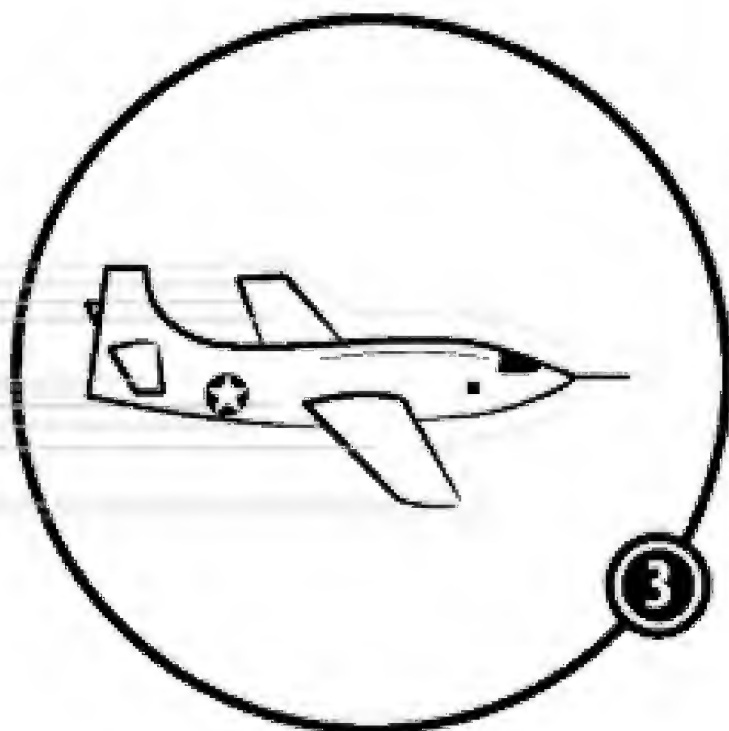
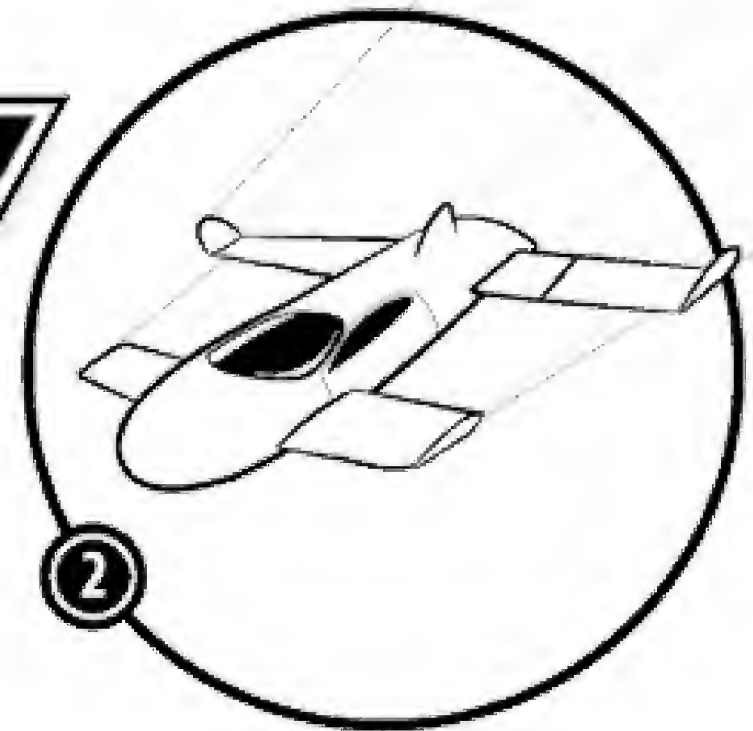
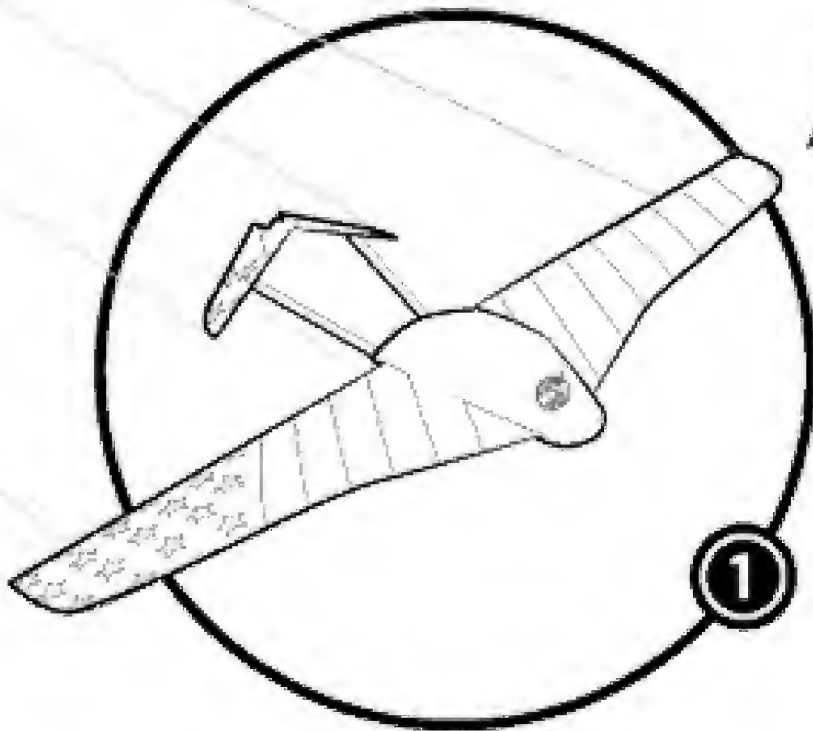
GET YOUR **CRAYONS** AND TAKE A TRIP WITH F.A. PLANE AND FRIENDS!
LEARN ABOUT THE FIRST "A" IN NASA, "AERONAUTICS!"



AERONAUTICS *The science of flight that deals with all types of aircraft.*

This storybook about NASA Aeronautics is dedicated to all the future aviation professionals—the youngsters that are in school today. We hope this story will inspire them to learn more about the many aspects of flight and the many types of careers associated with the U.S. aviation industry.

MATCH GAME!



These images are taken from pages in this storybook. When you have finished reading the book, come back to test your knowledge of these types of aircraft. Match the image of the aircraft with its name in the storybook. The names of the planes are listed below, choose the number of the image that fits its name!

- ☐ A Personal Air Vehicle
- ☐ B Joint Strike Fighter
- ☐ C Hypersonic X-43 Plane
- ☐ D Blended Wing Body
- ☐ E X-1 Supersonic Plane
- ☐ F Mars Plane

Acknowledgements

Original idea & text for a museum storybook exhibit

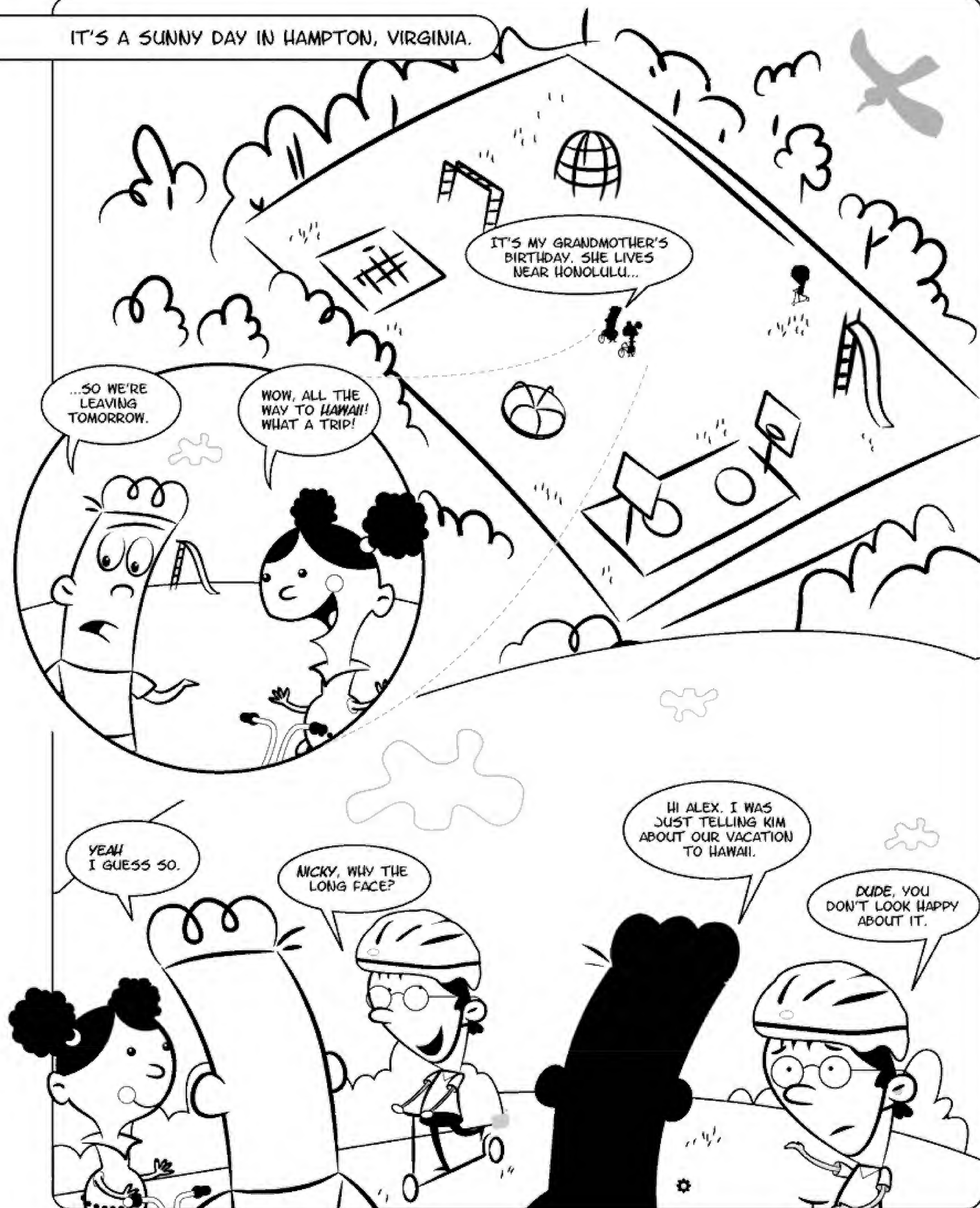
Natalie S. Friend
Planners Collaborative Inc.

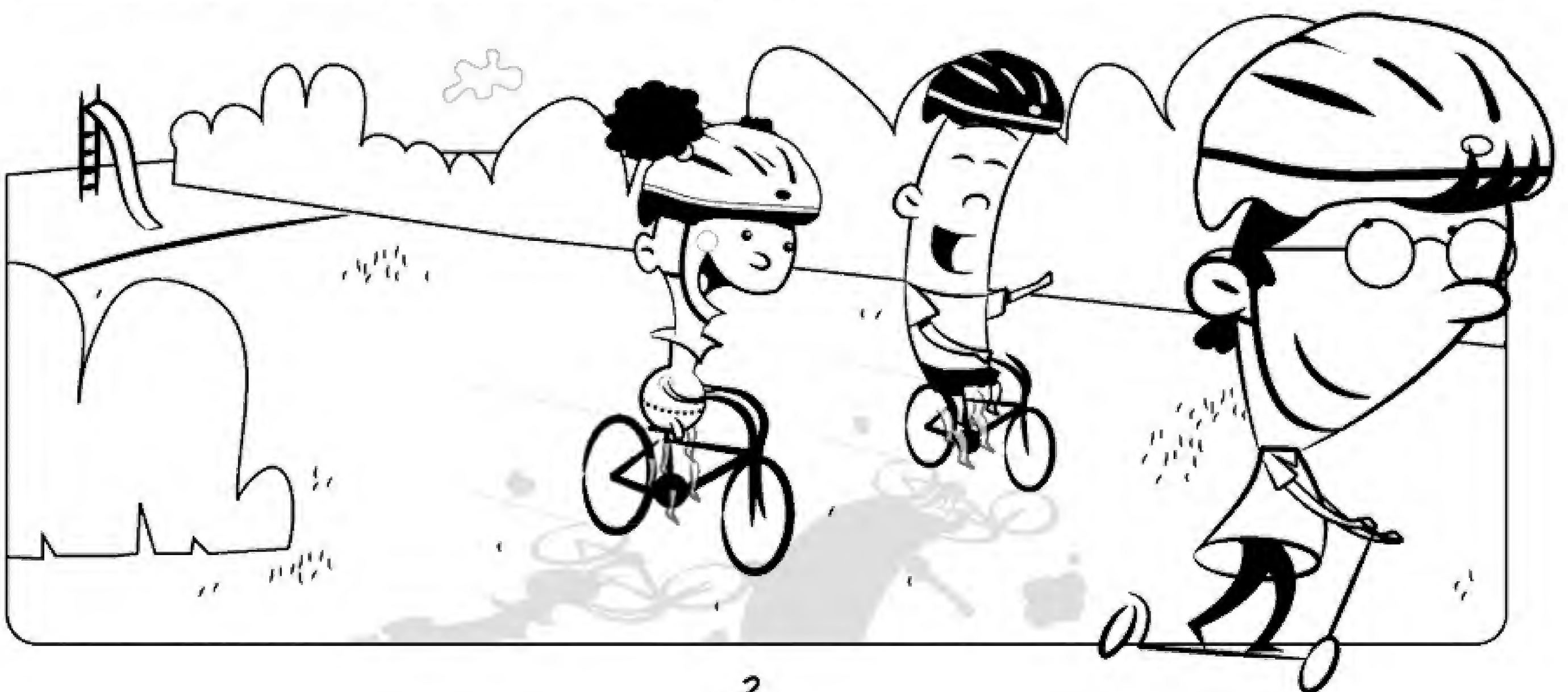
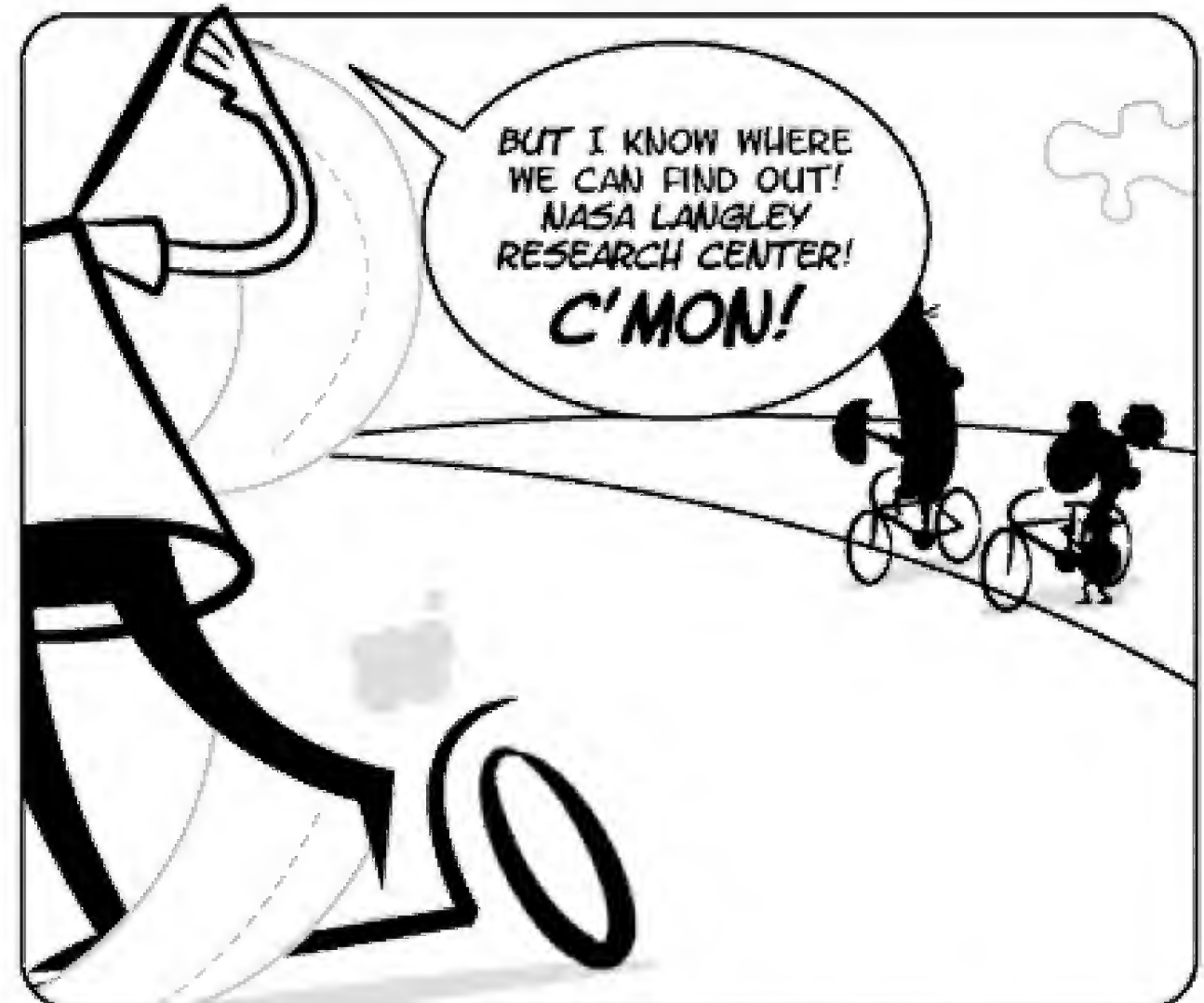
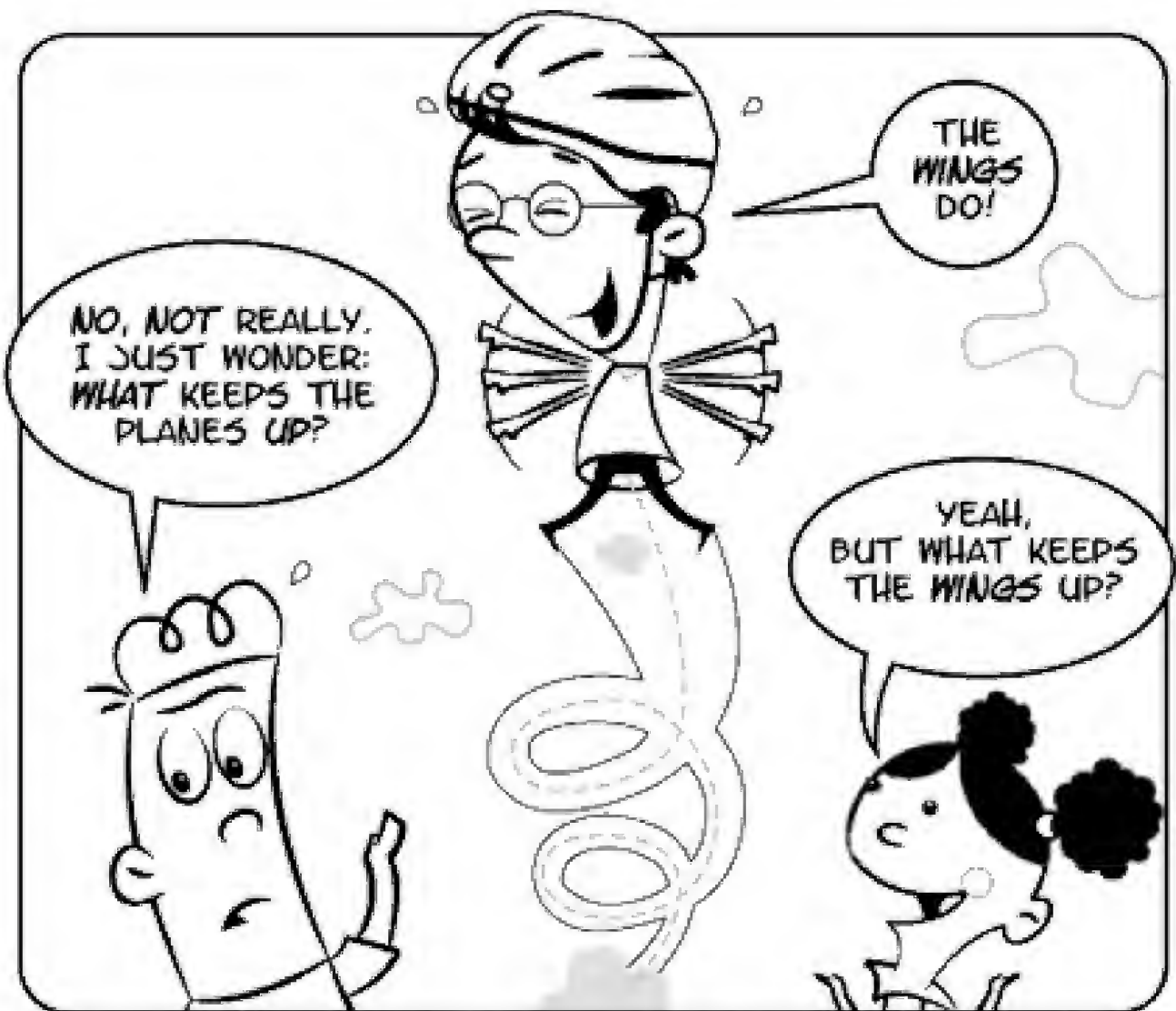
Illustrations
& layout

Wade A. Mickley
NCI Information Systems

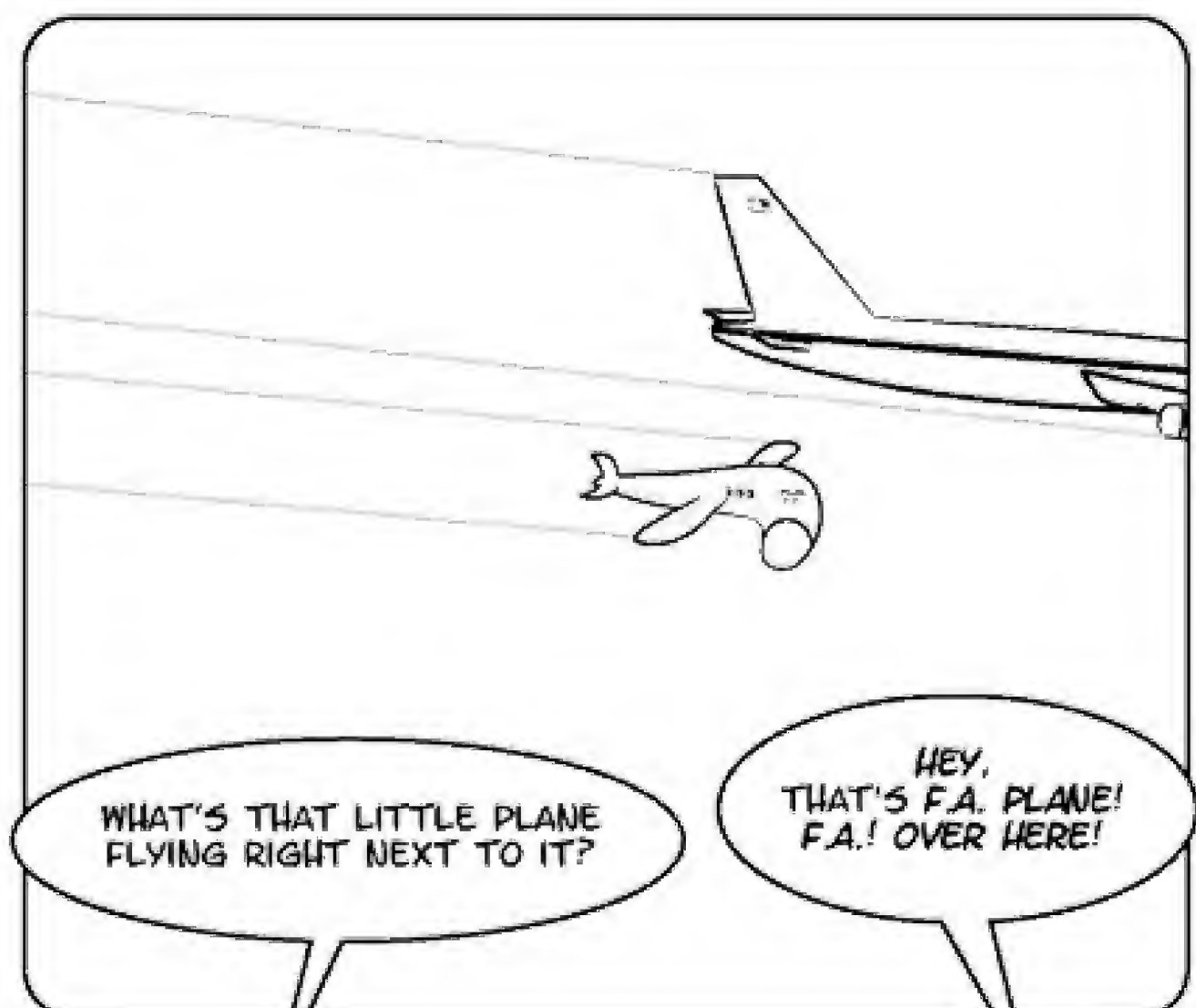
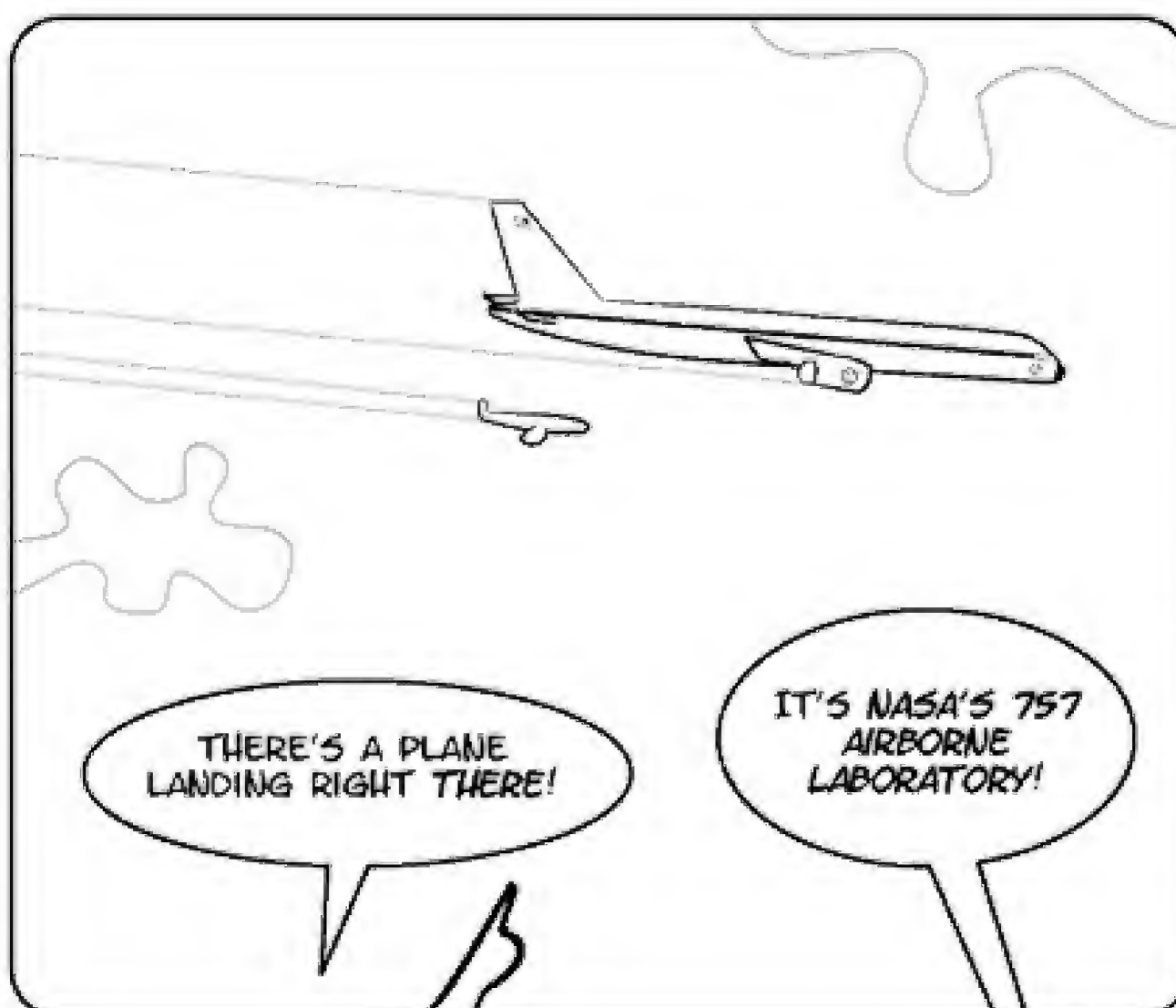
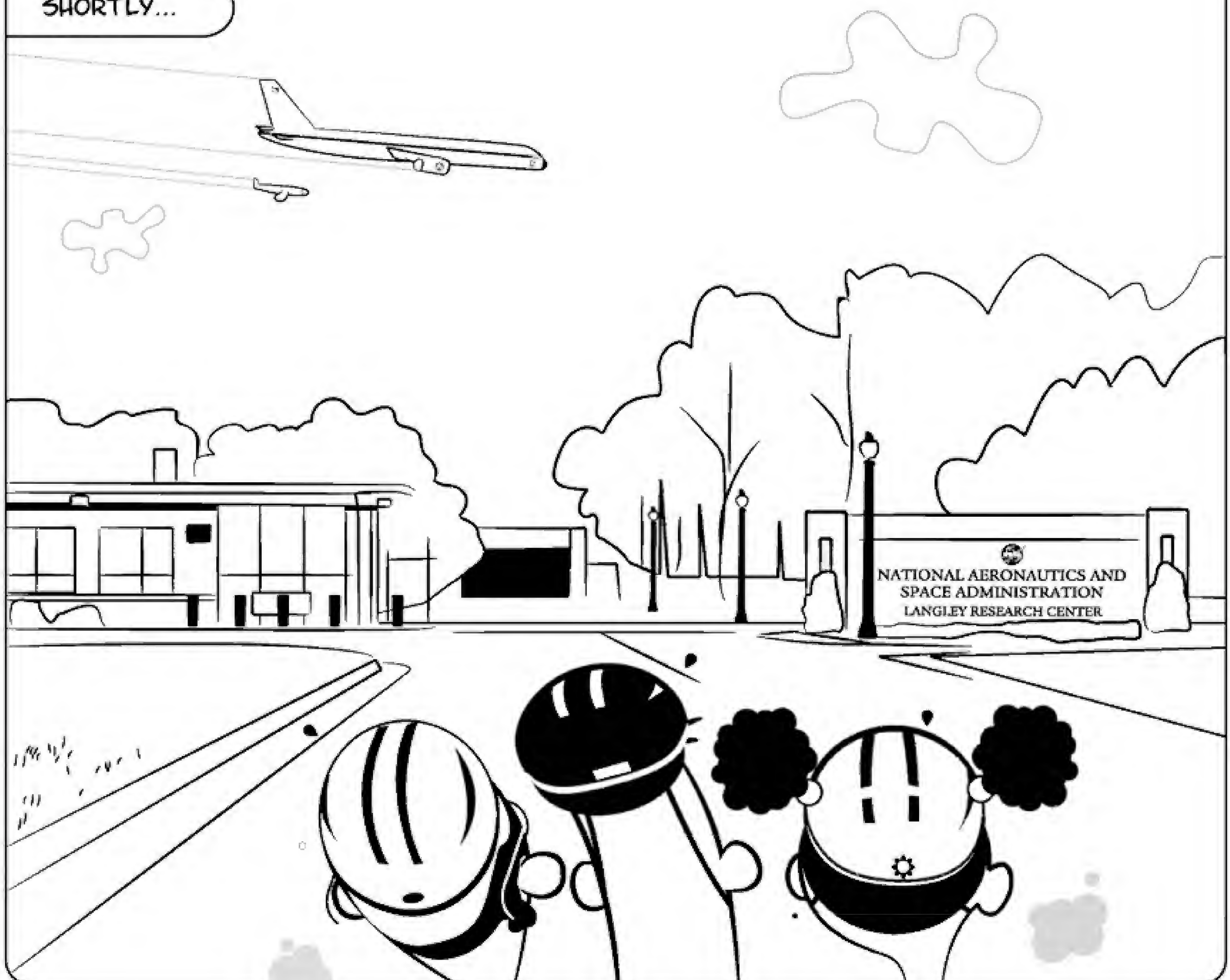
Answer key: A-2, B-5, C-4, D-6, E-3, F-1

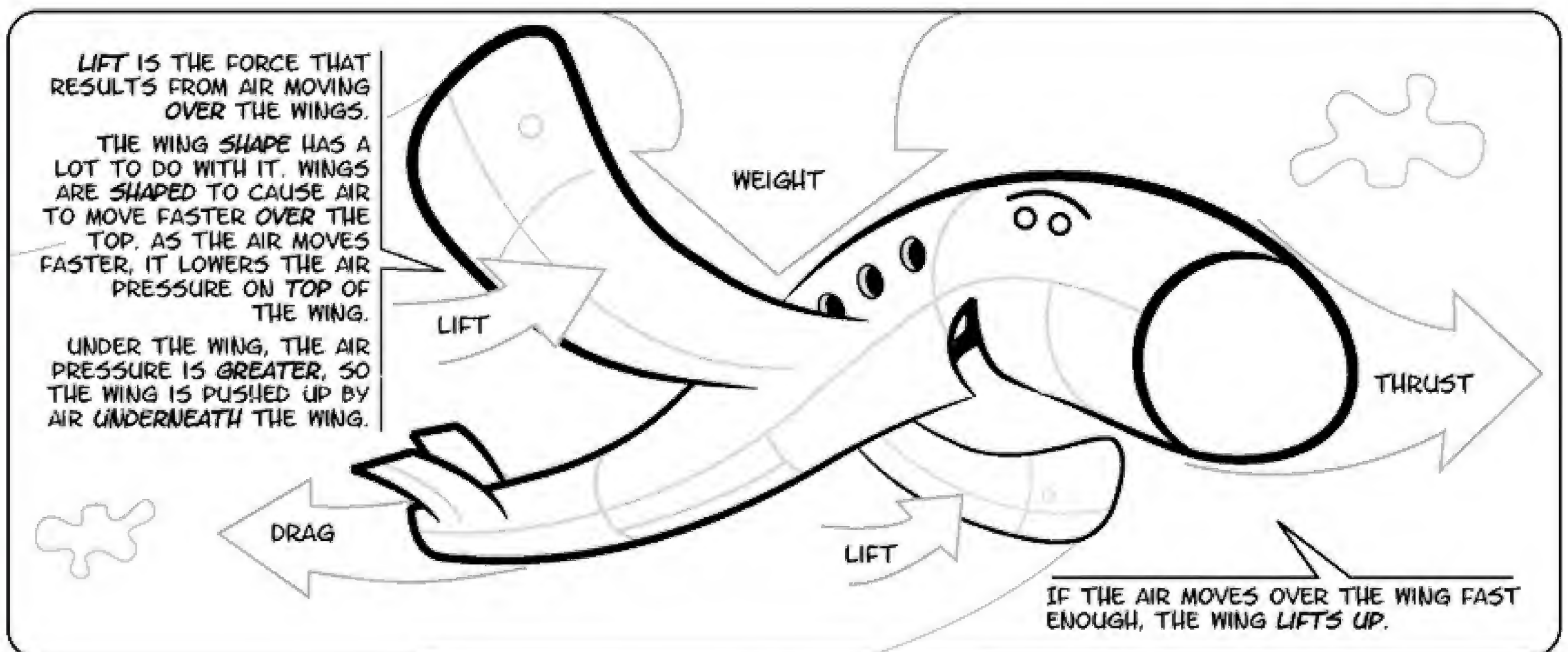
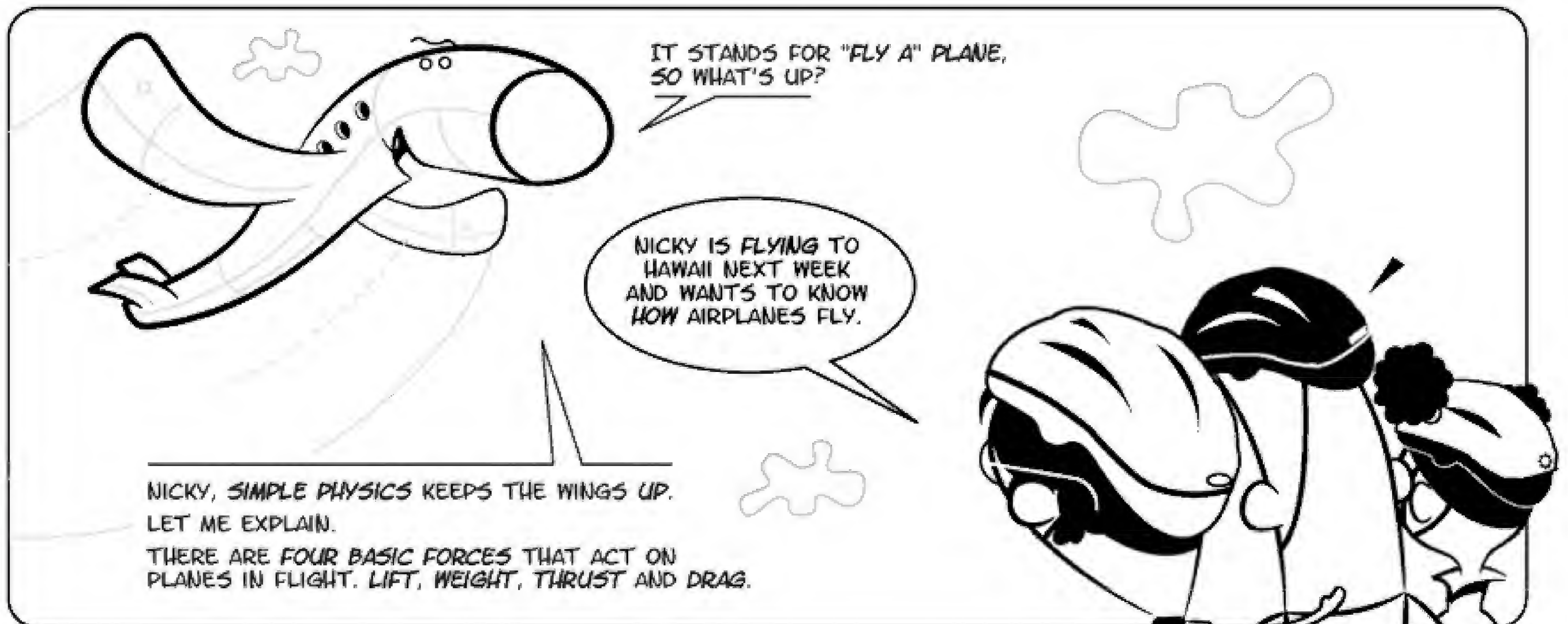
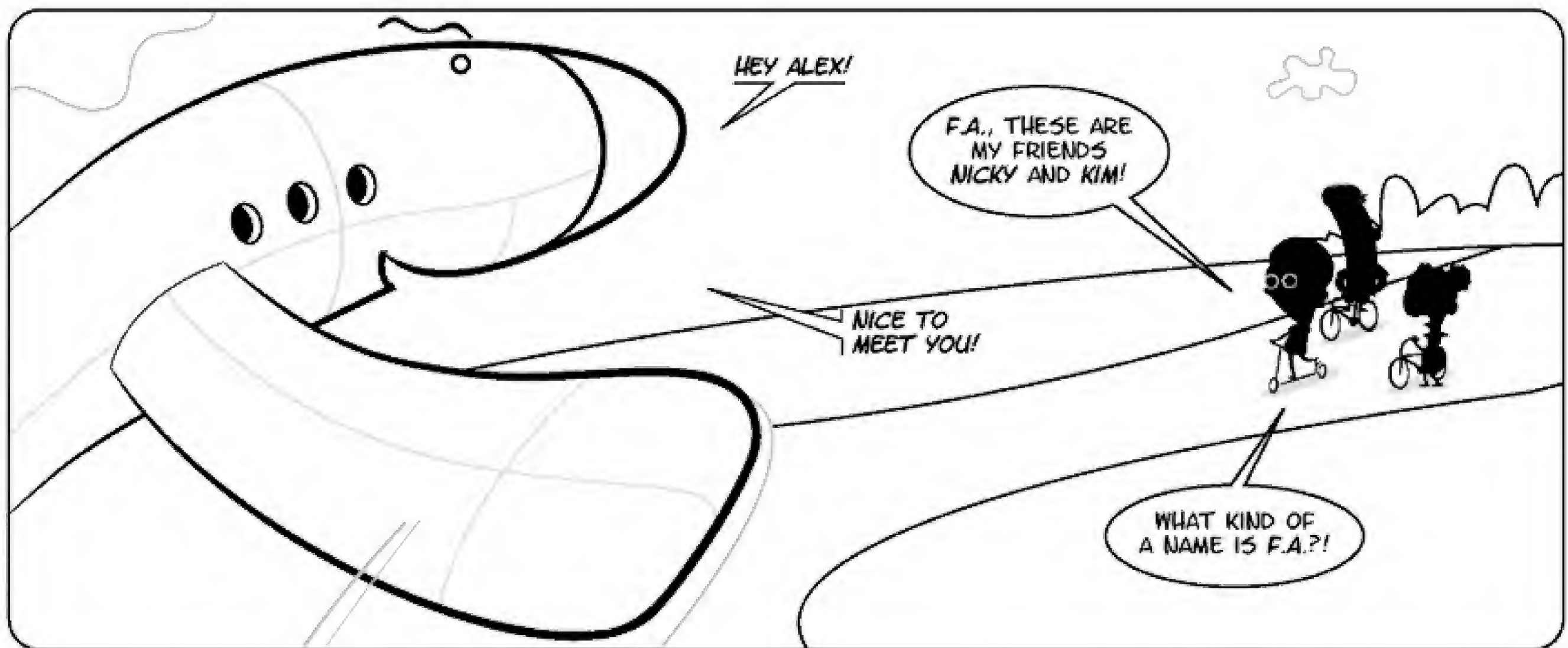
IT'S A SUNNY DAY IN HAMPTON, VIRGINIA.

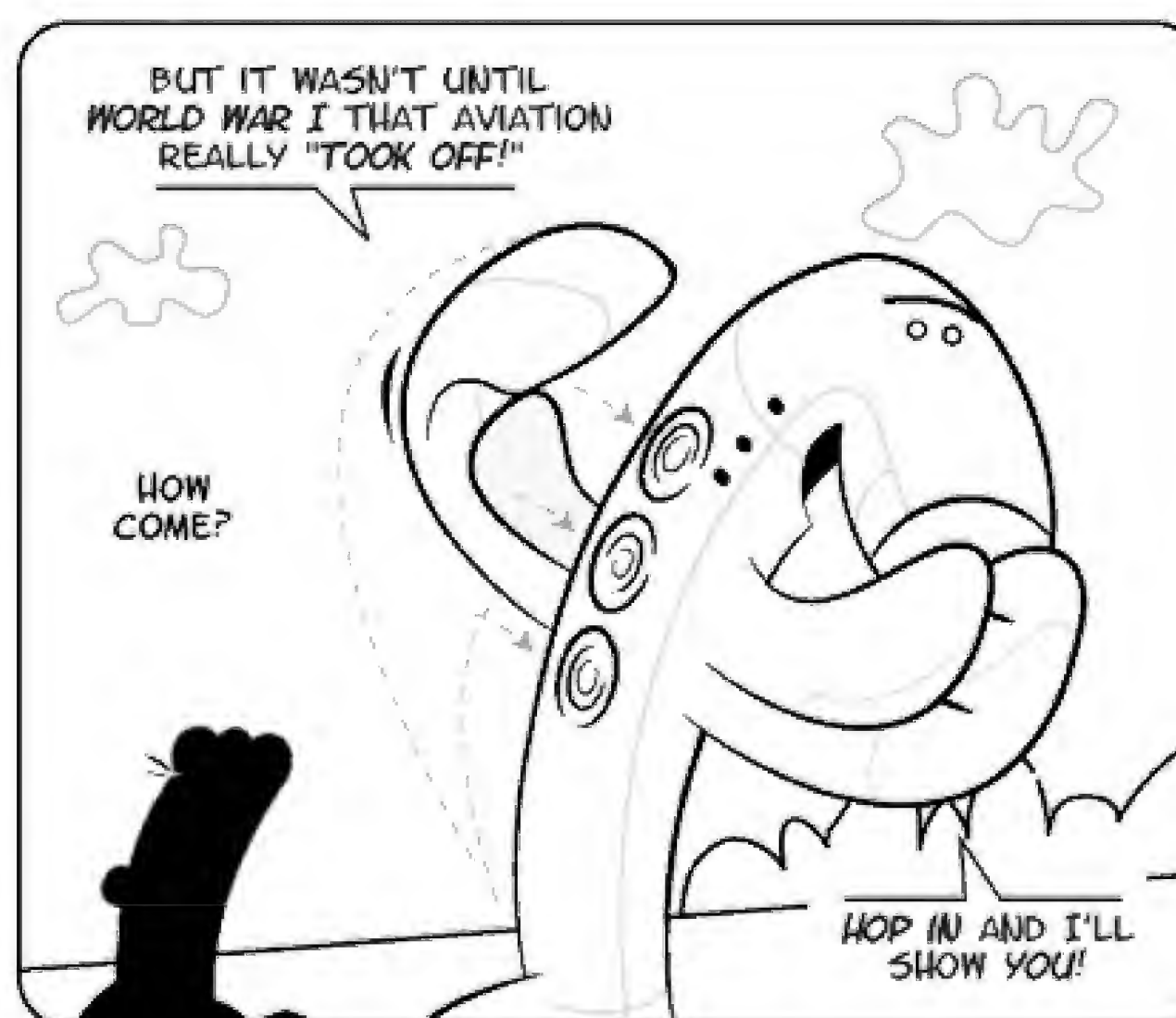
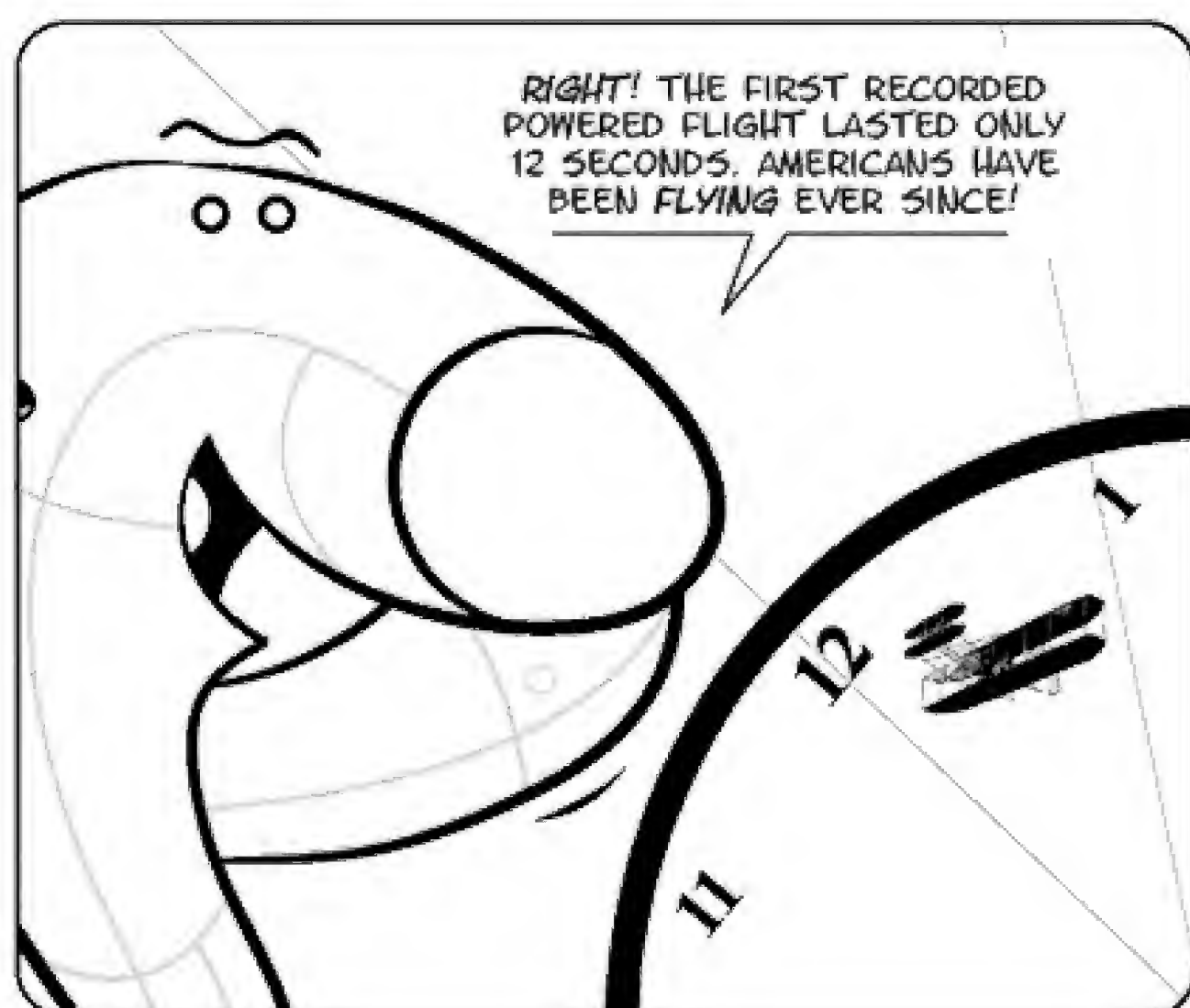
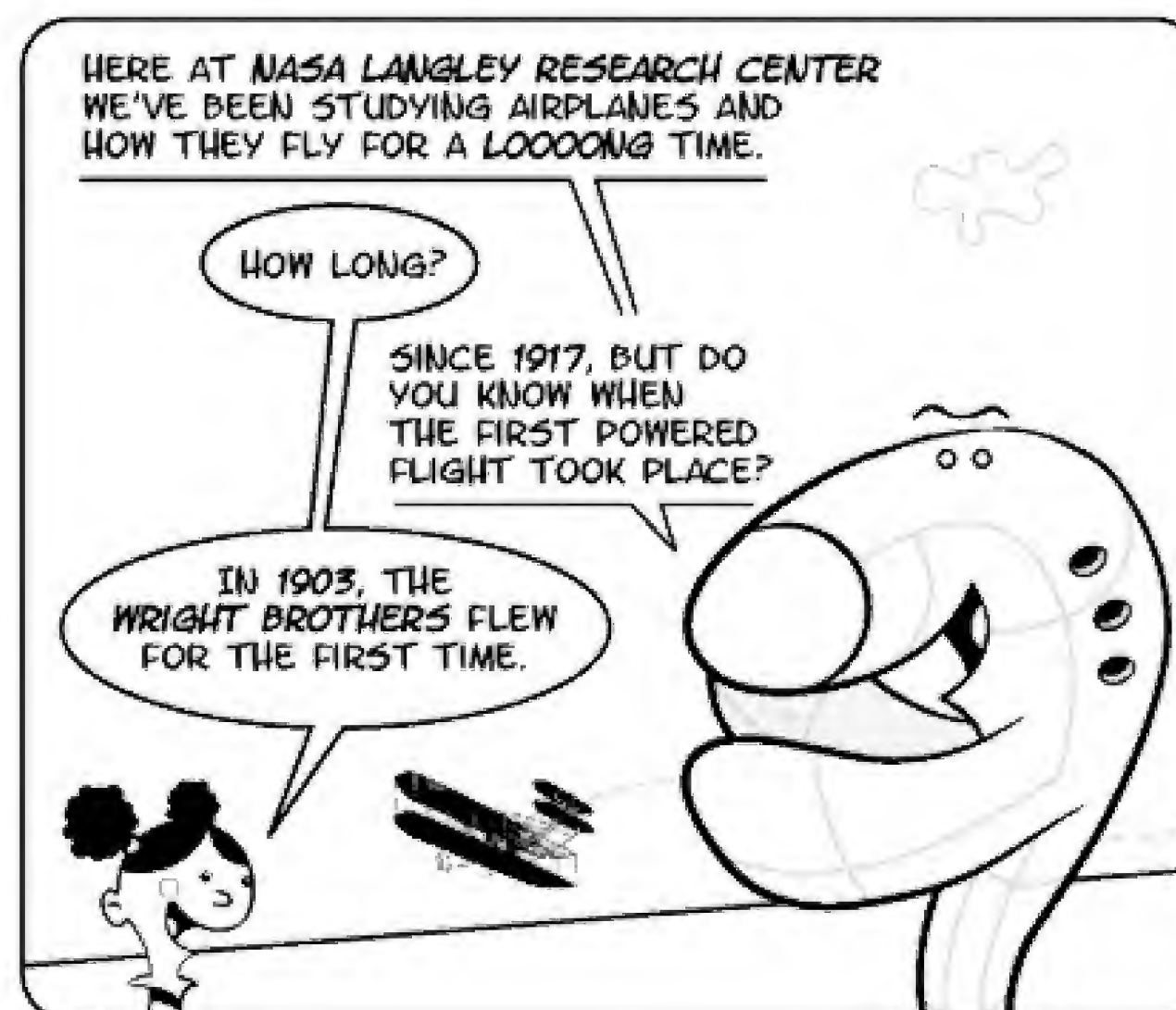




SHORTLY...







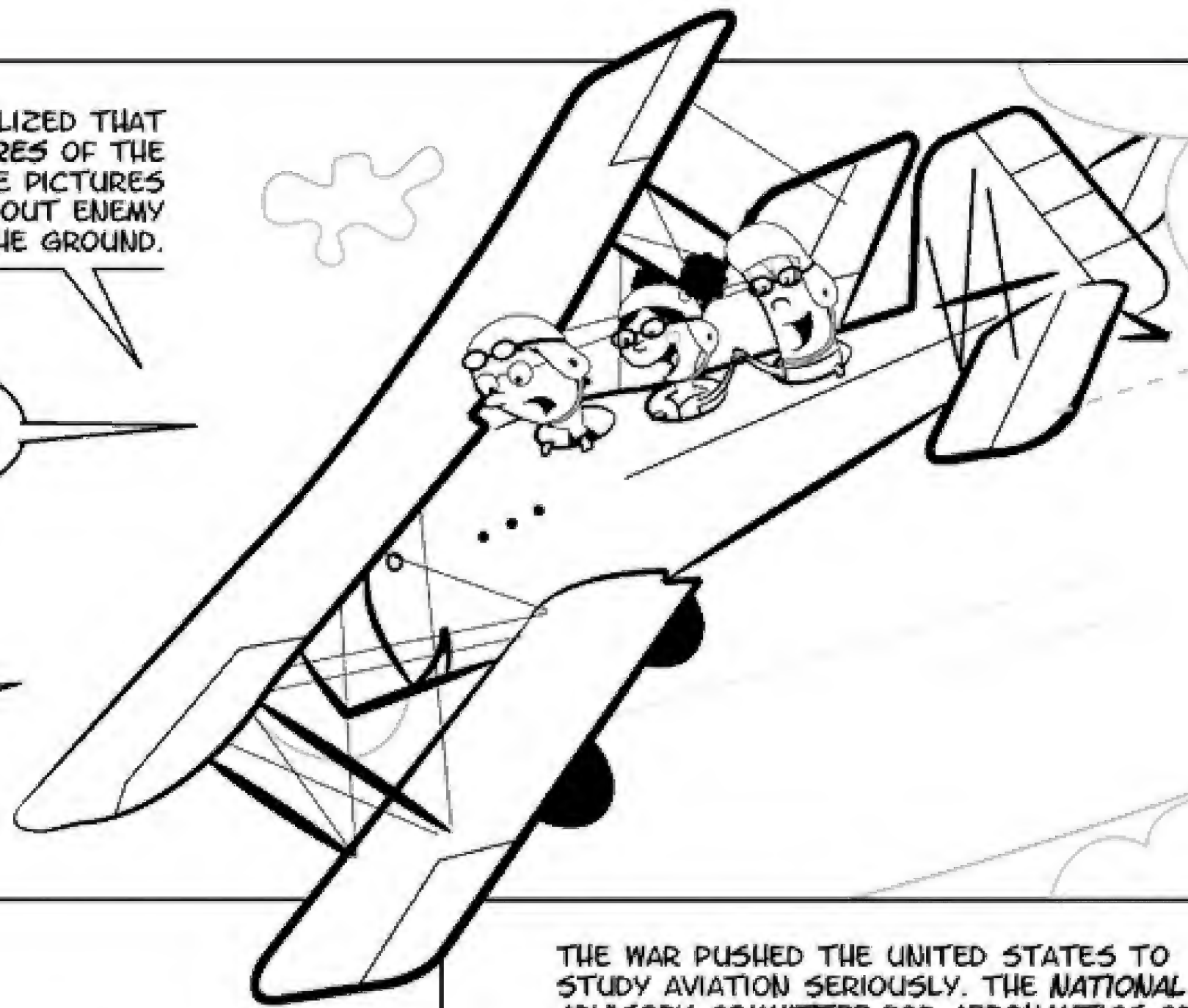
DURING WORLD WAR I PEOPLE REALIZED THAT YOU COULD TAKE PICTURES OF THE BATTLEFIELD FROM THE AIR. THESE PICTURES GAVE IMPORTANT INFORMATION ABOUT ENEMY POSITIONS TO SOLDIERS ON THE GROUND.

WOW, YOU CAN SEE EVERYTHING FROM UP HERE!

THAT WAS THE IDEA NICKY.

EACH SIDE TRIED TO KEEP THE OTHER FROM GETTING GOOD PICTURES.

PILOTS STARTED THROWING THINGS AT EACH OTHER, AND EVENTUALLY THEY MOUNTED MACHINE GUNS TO THEIR PLANES.

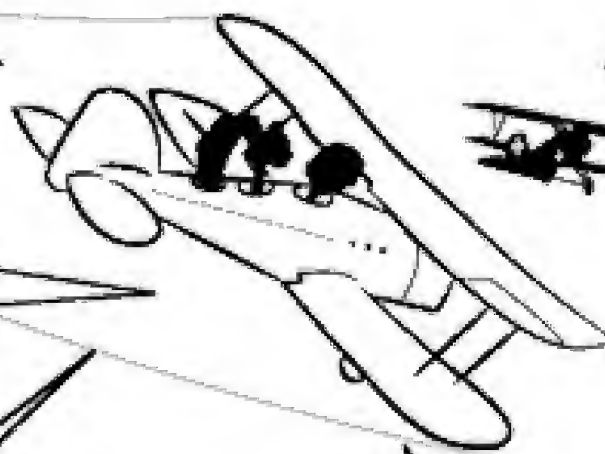


LIKE THE RED BARON?

EXACTLY! WORLD WAR I SAW THE BIRTH OF AIR COMBAT.

I THINK THAT GUY SEES US!

WE BETTER GET OUT OF HERE!



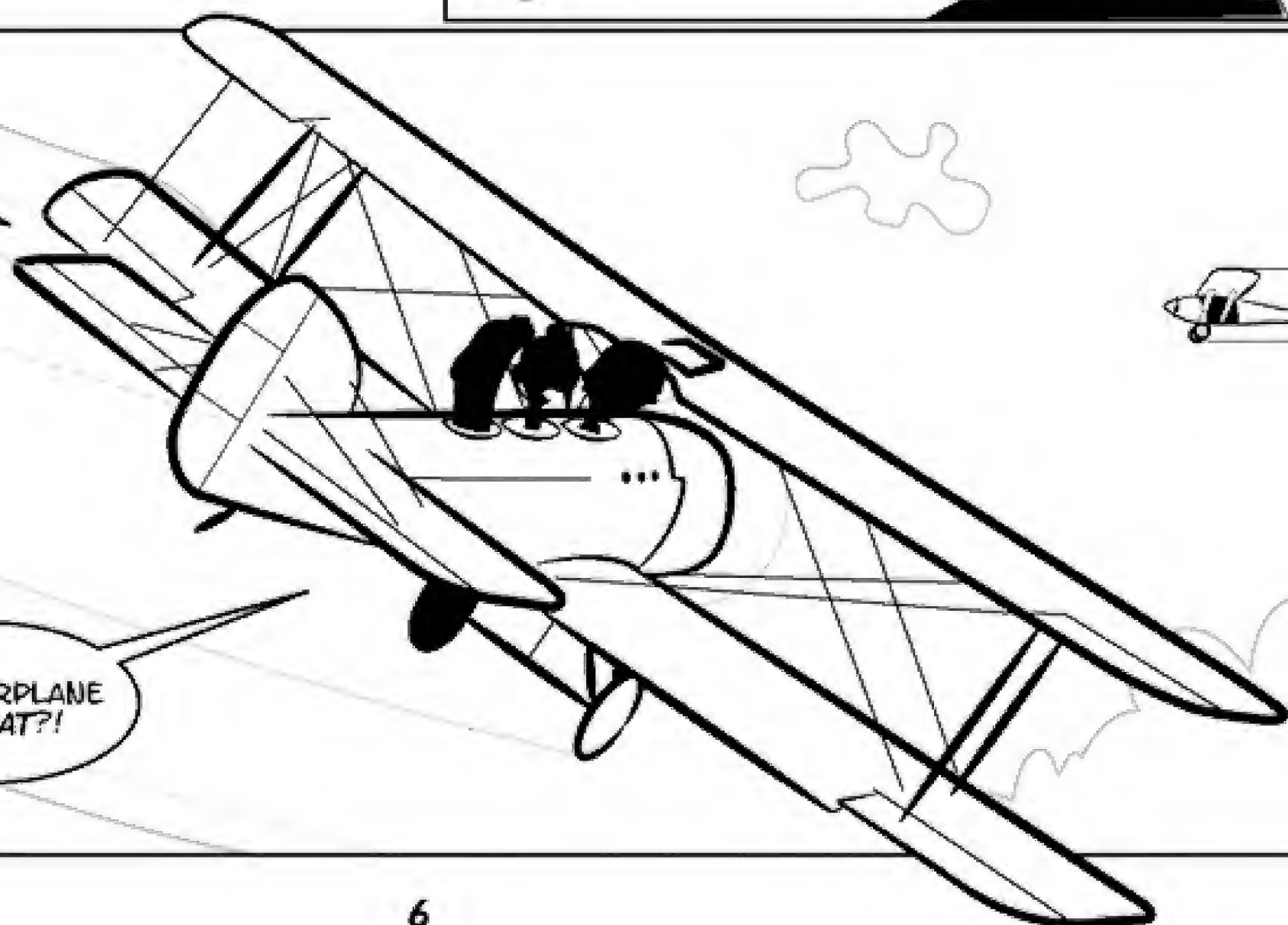
THE WAR PUSHED THE UNITED STATES TO STUDY AVIATION SERIOUSLY. THE NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS OR NACA WAS ESTABLISHED IN 1915.

TWO YEARS LATER, LANGLEY AERONAUTICAL LABORATORY WAS FOUNDED IN HAMPTON, VA.

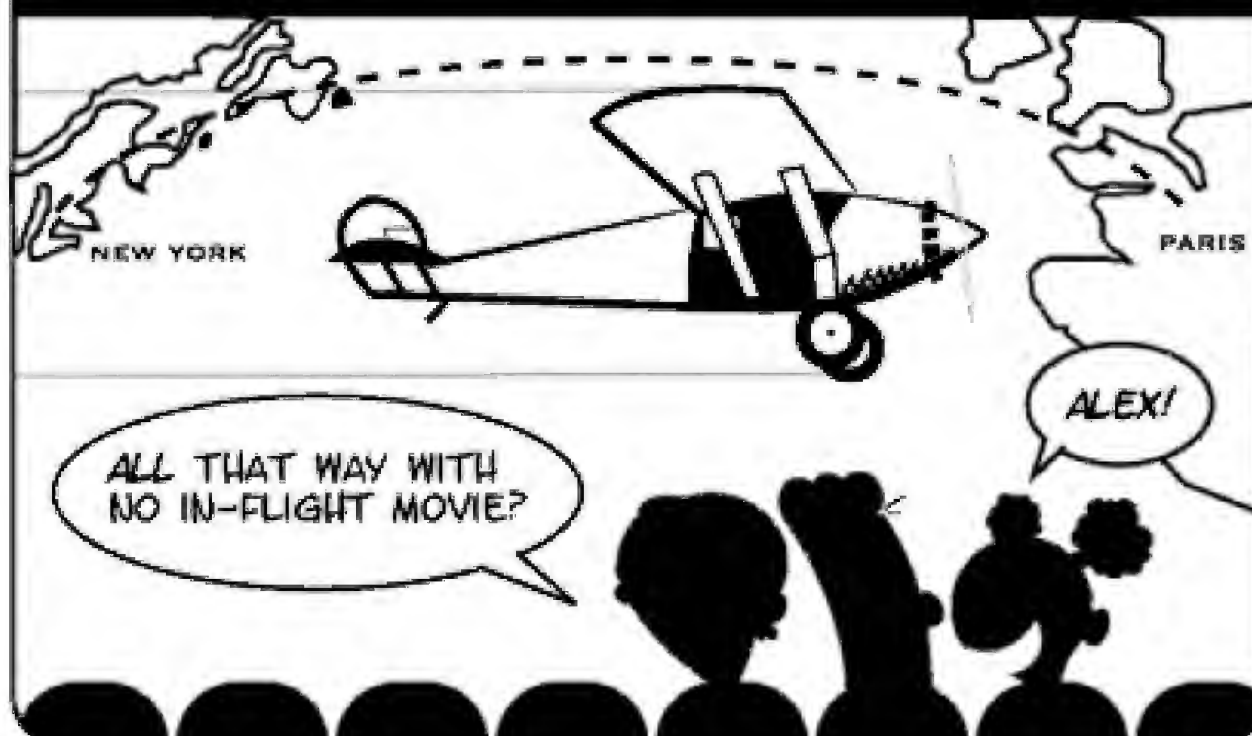


NACA IS WHAT EVENTUALLY BECAME THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, THE NASA THAT WE KNOW TODAY.

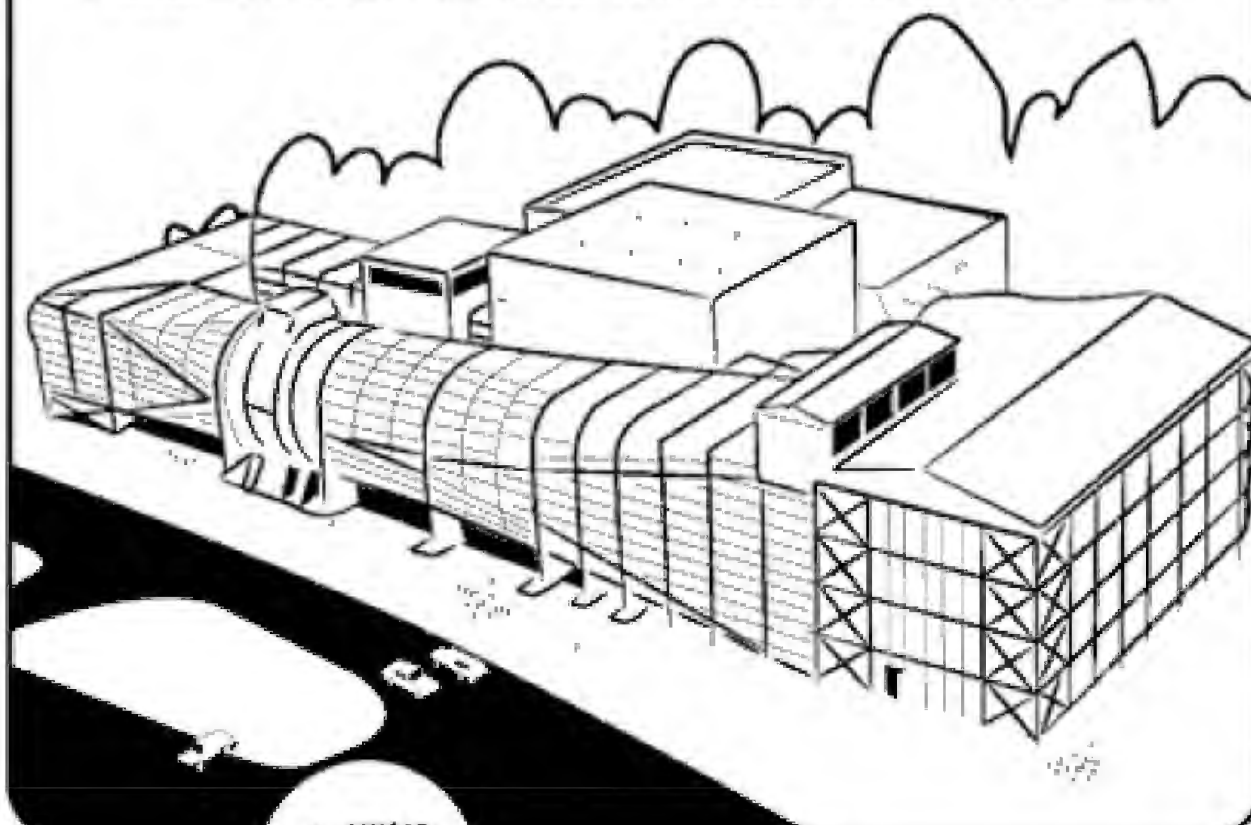
WHAT AIRPLANE IS THAT?!



THAT'S THE *SPIRIT OF SAINT LOUIS*. WE'RE USED TO FLYING ACROSS THE OCEANS, BUT CHARLES LINDBERGH WAS THE FIRST ONE TO FLY NON-STOP ACROSS THE ATLANTIC OCEAN IN 1927.

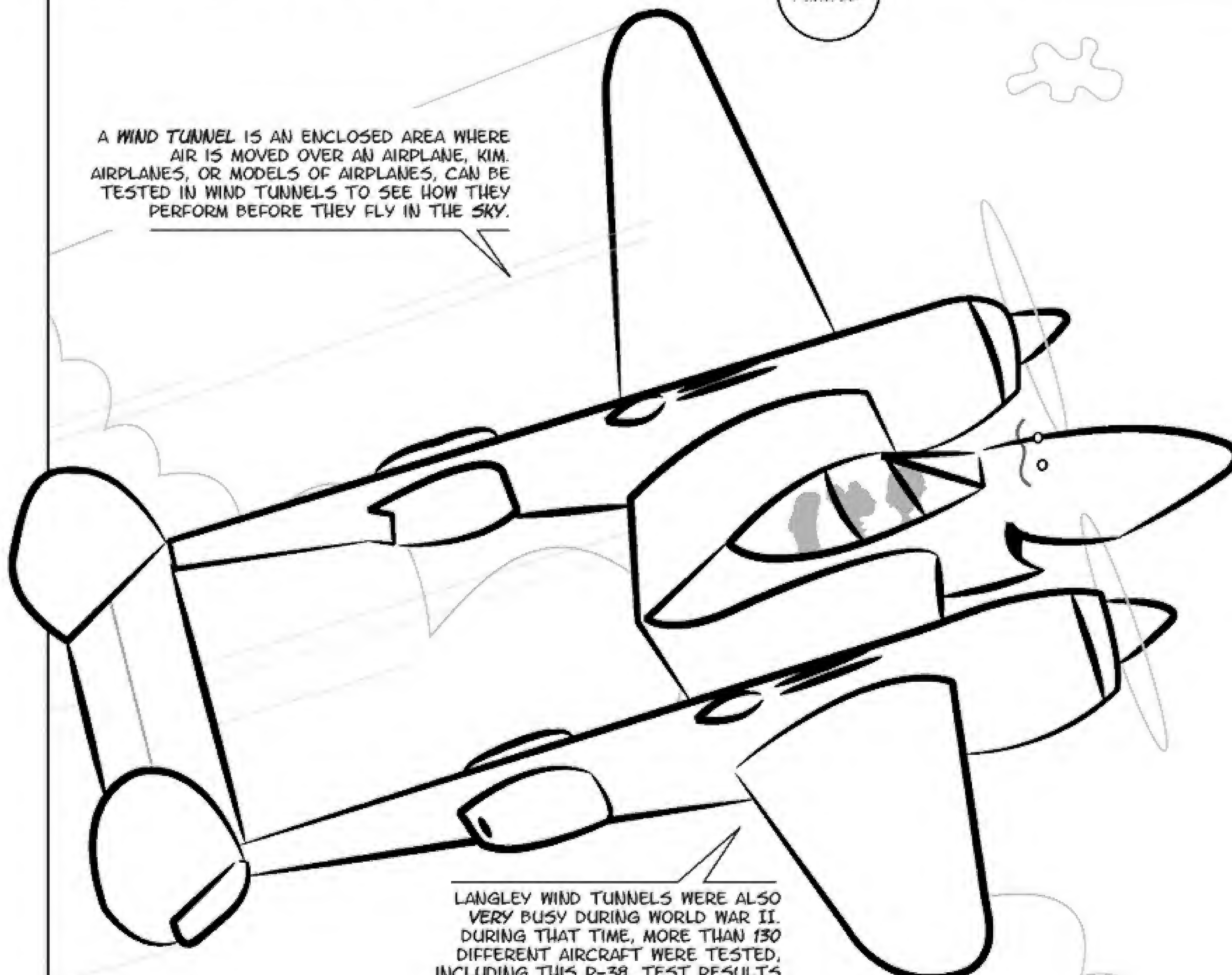


AFTER THE WAR, LANGLEY BUILT A *WIND TUNNEL* SO BIG YOU COULD PUT A FULL-SIZE PLANE IN IT. THERE ARE MORE THAN 20 *WIND TUNNELS* AT LANGLEY.

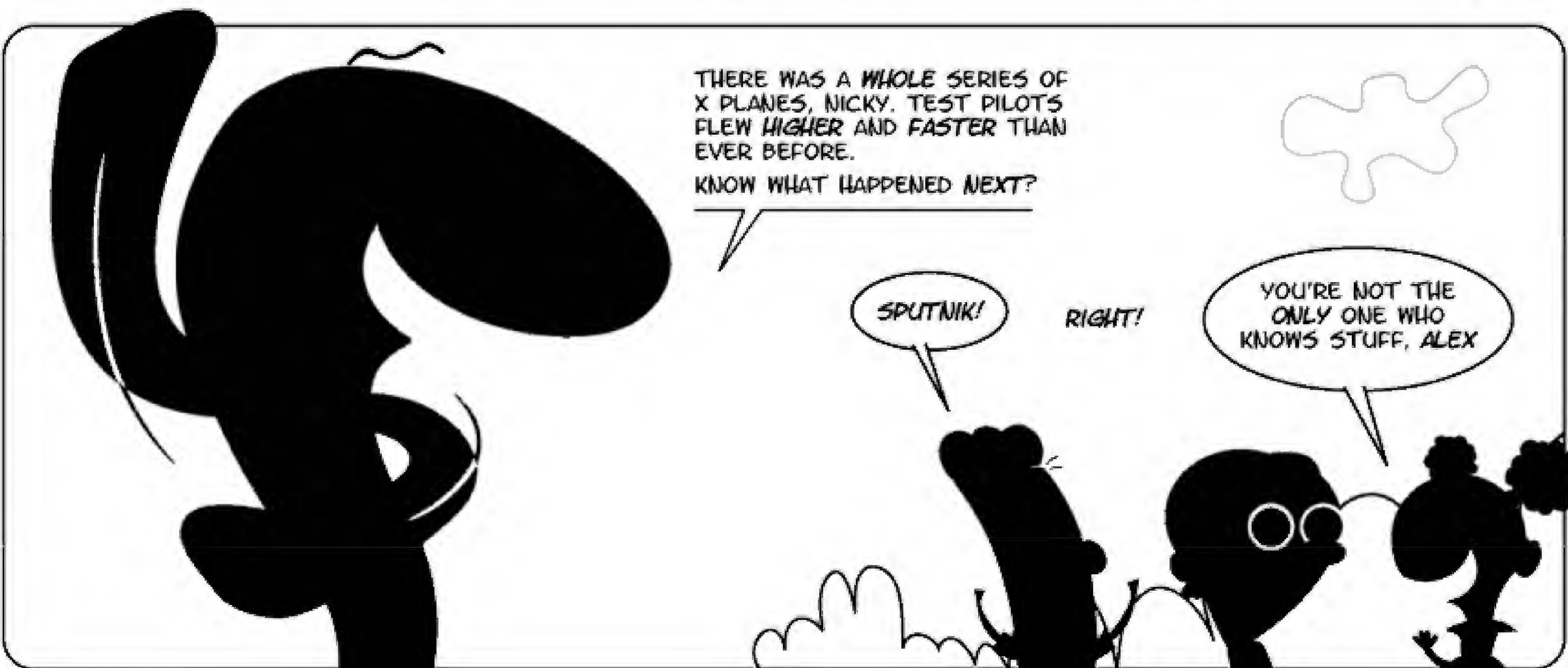
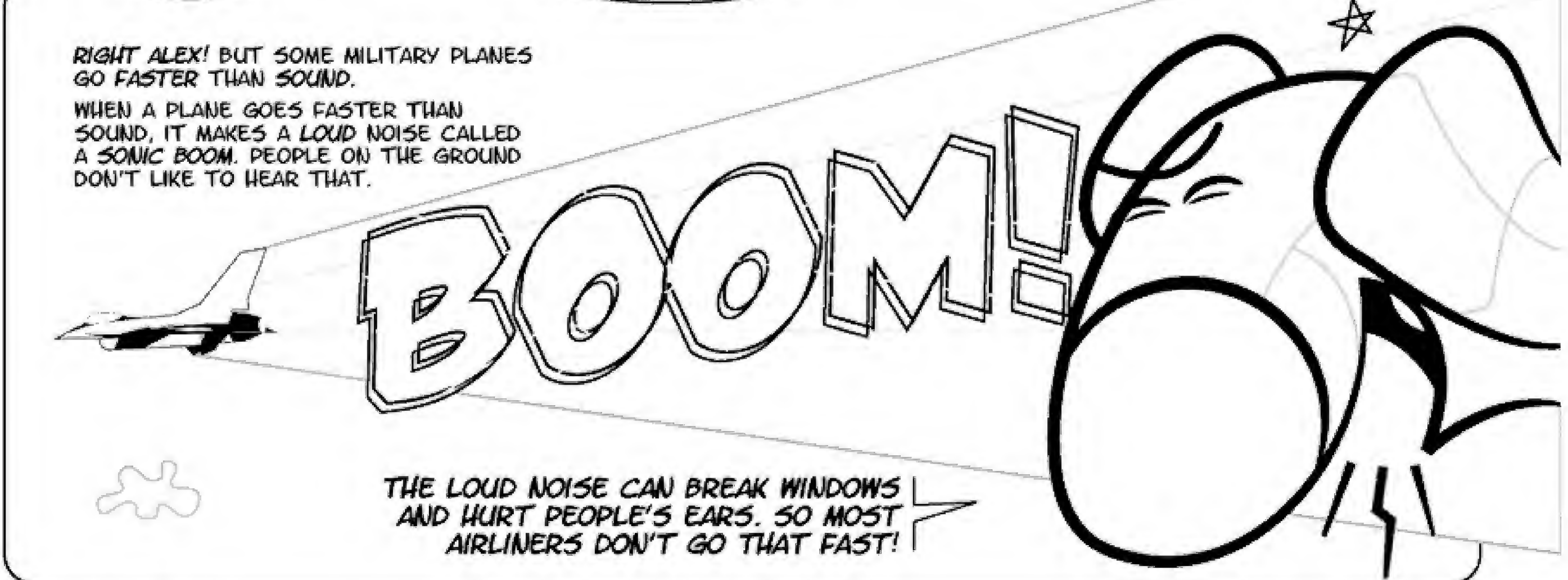
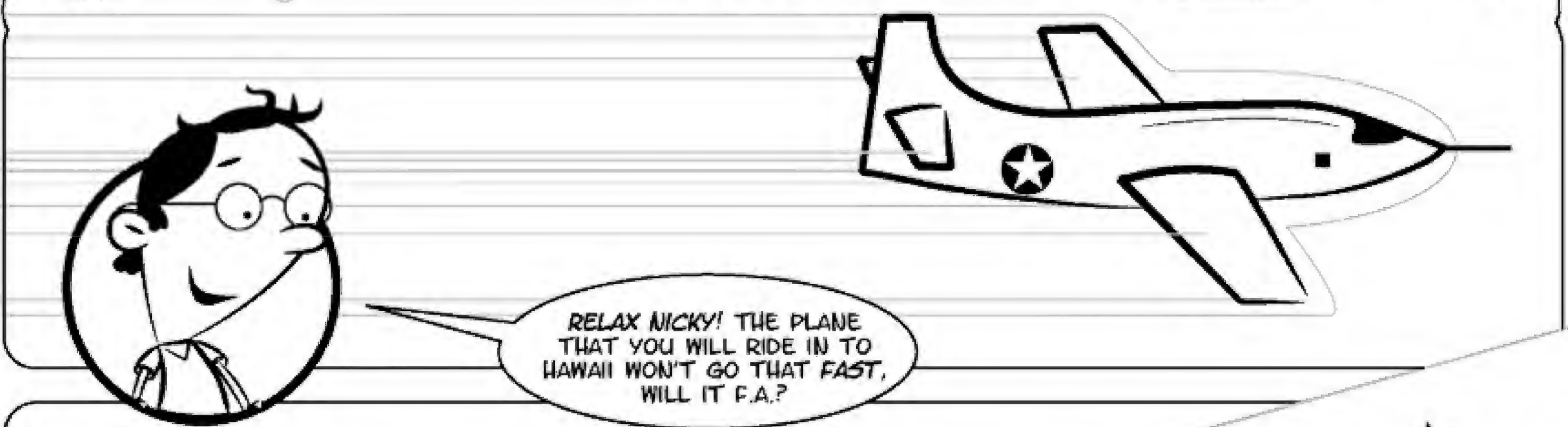
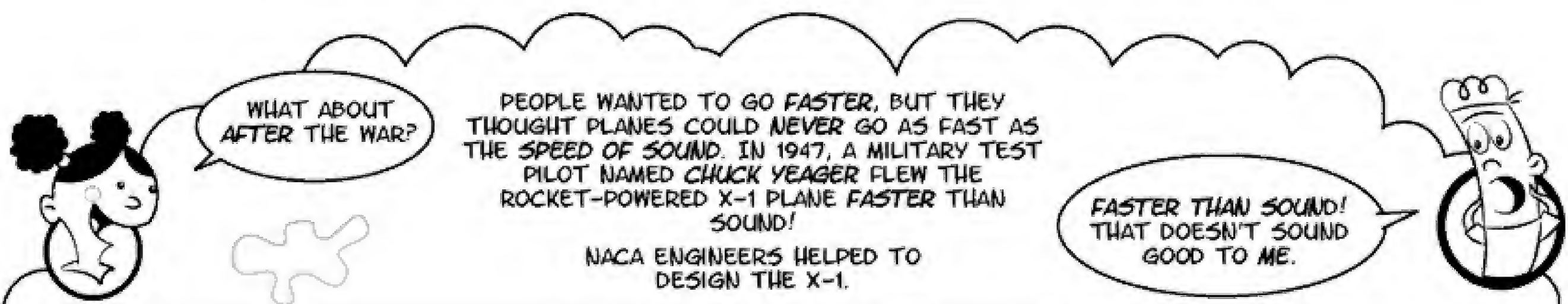


A *WIND TUNNEL*?

A *WIND TUNNEL* IS AN ENCLOSED AREA WHERE AIR IS MOVED OVER AN AIRPLANE, KIM. AIRPLANES, OR MODELS OF AIRPLANES, CAN BE TESTED IN *WIND TUNNELS* TO SEE HOW THEY PERFORM BEFORE THEY FLY IN THE *SKY*.



LANGLEY *WIND TUNNELS* WERE ALSO VERY BUSY DURING WORLD WAR II. DURING THAT TIME, MORE THAN 130 DIFFERENT AIRCRAFT WERE TESTED, INCLUDING THIS P-38. TEST RESULTS WERE USED TO MAKE BETTER PLANES.





AND THAT'S WHEN
NACA BECAME NASA, OR THE
NATIONAL AERONAUTICS AND
SPACE ADMINISTRATION.

SO WHO STUDIES
AIRPLANES NOW, F.A.?

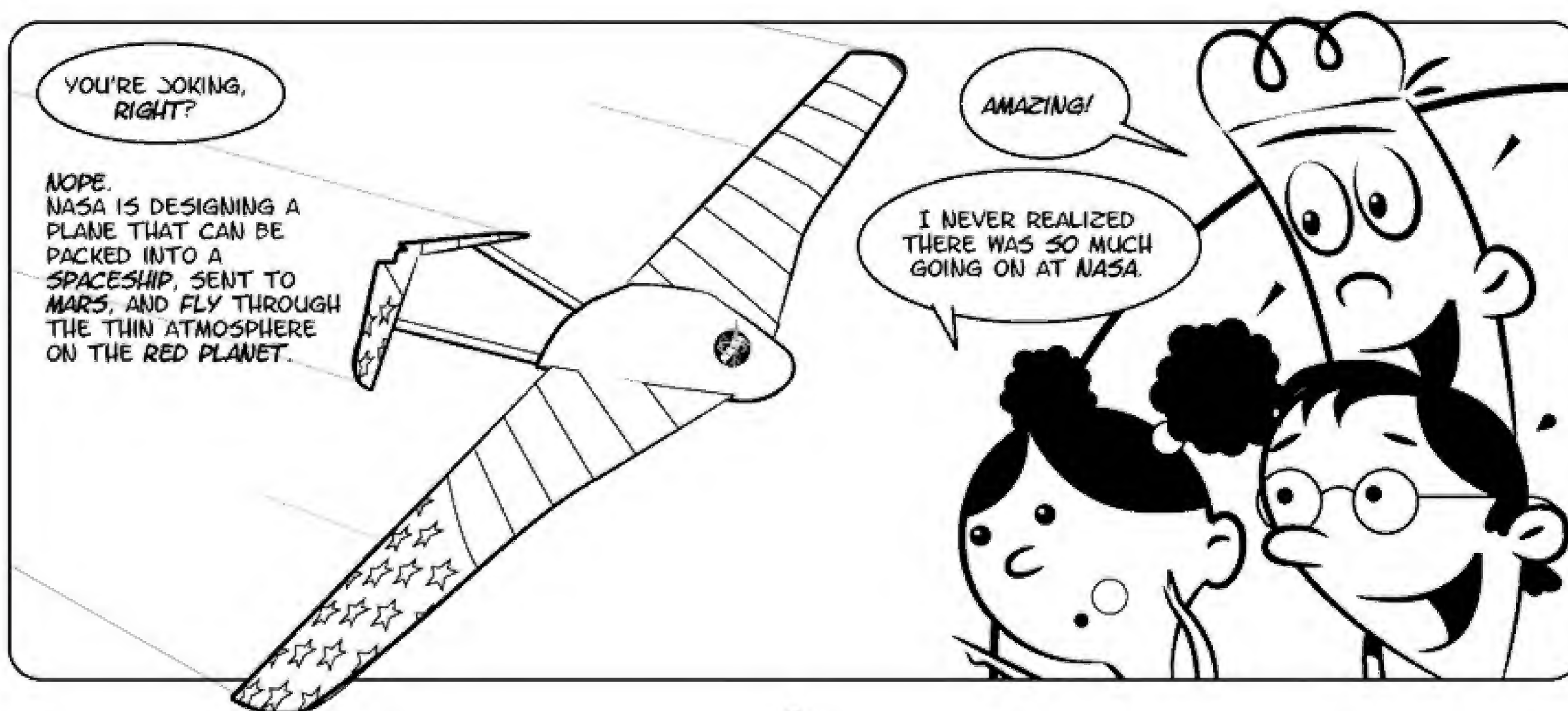
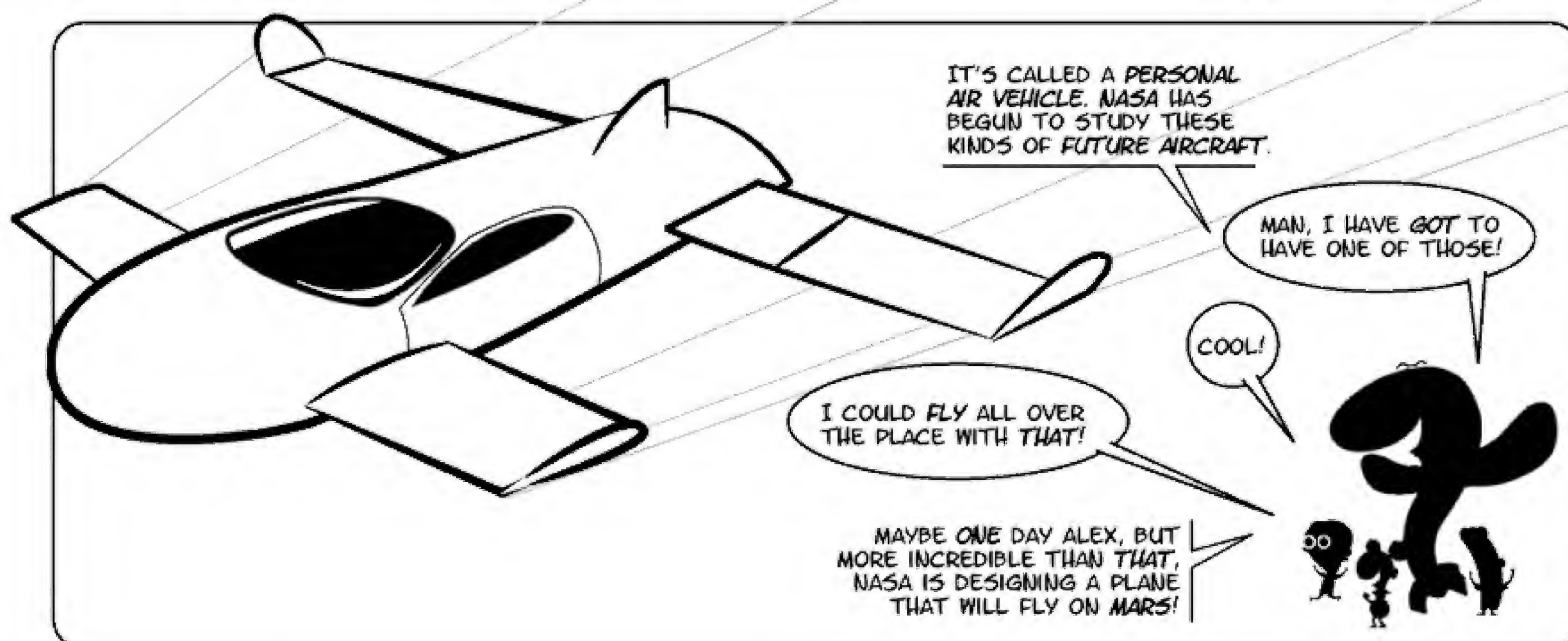
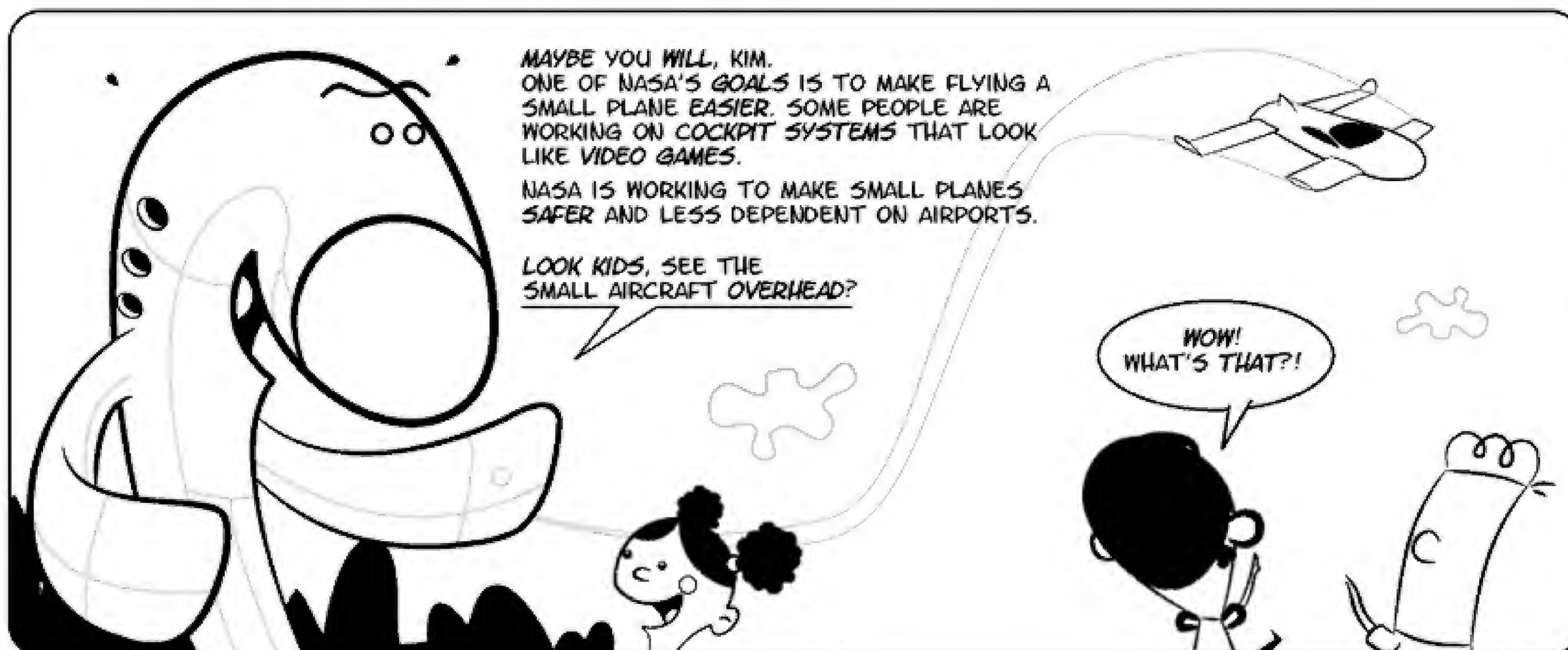
THE SOVIET UNION LAUNCHED
THE FIRST SPACE SATELLITE,
SPUTNIK, IN 1957.

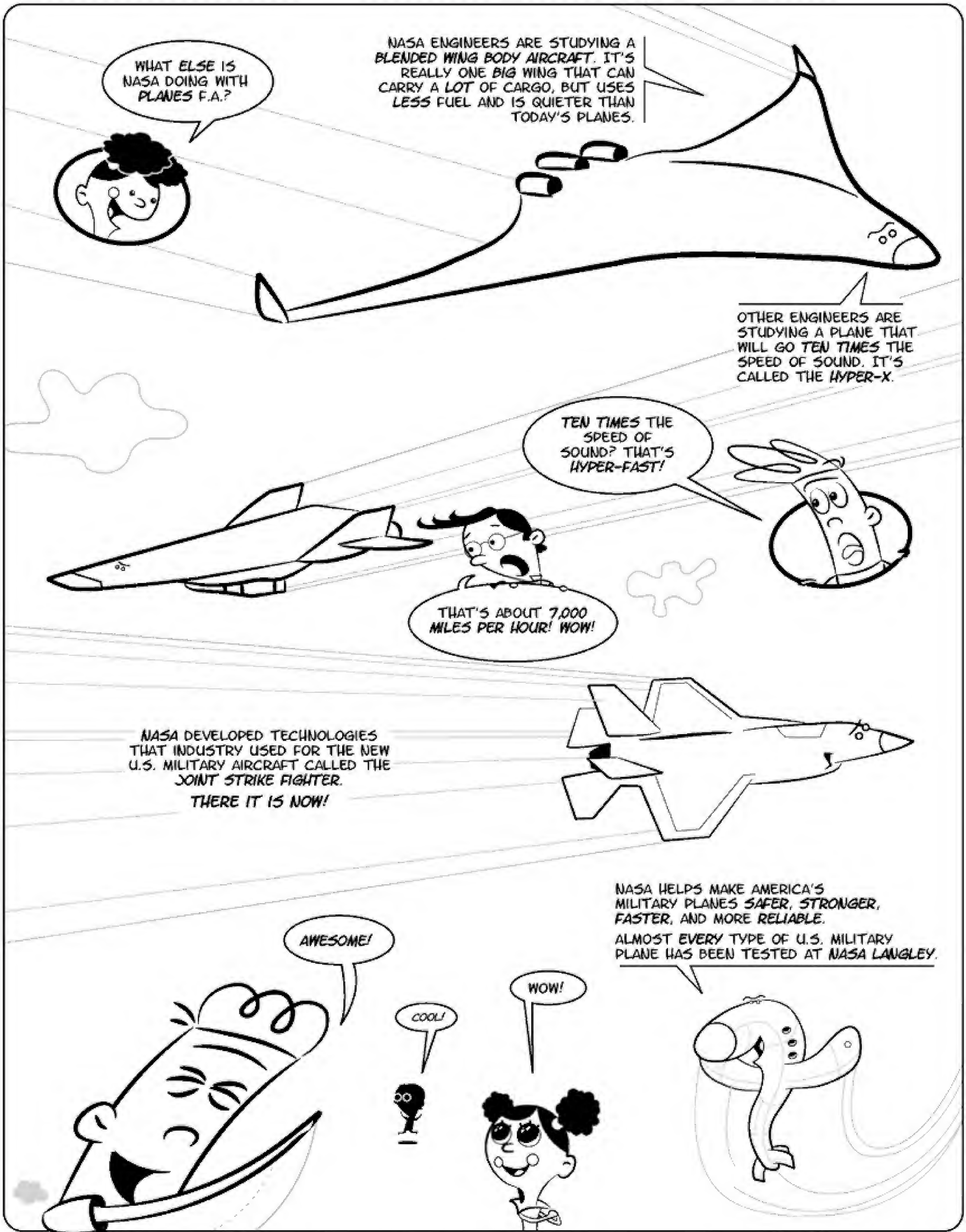
RIGHT AGAIN KIM.
LANGLEY WAS ONE OF THE
PLACES STUDYING SPACE FLIGHT;
IT HELPED TRAIN ASTRONAUTS
THAT LANDED ON THE MOON.

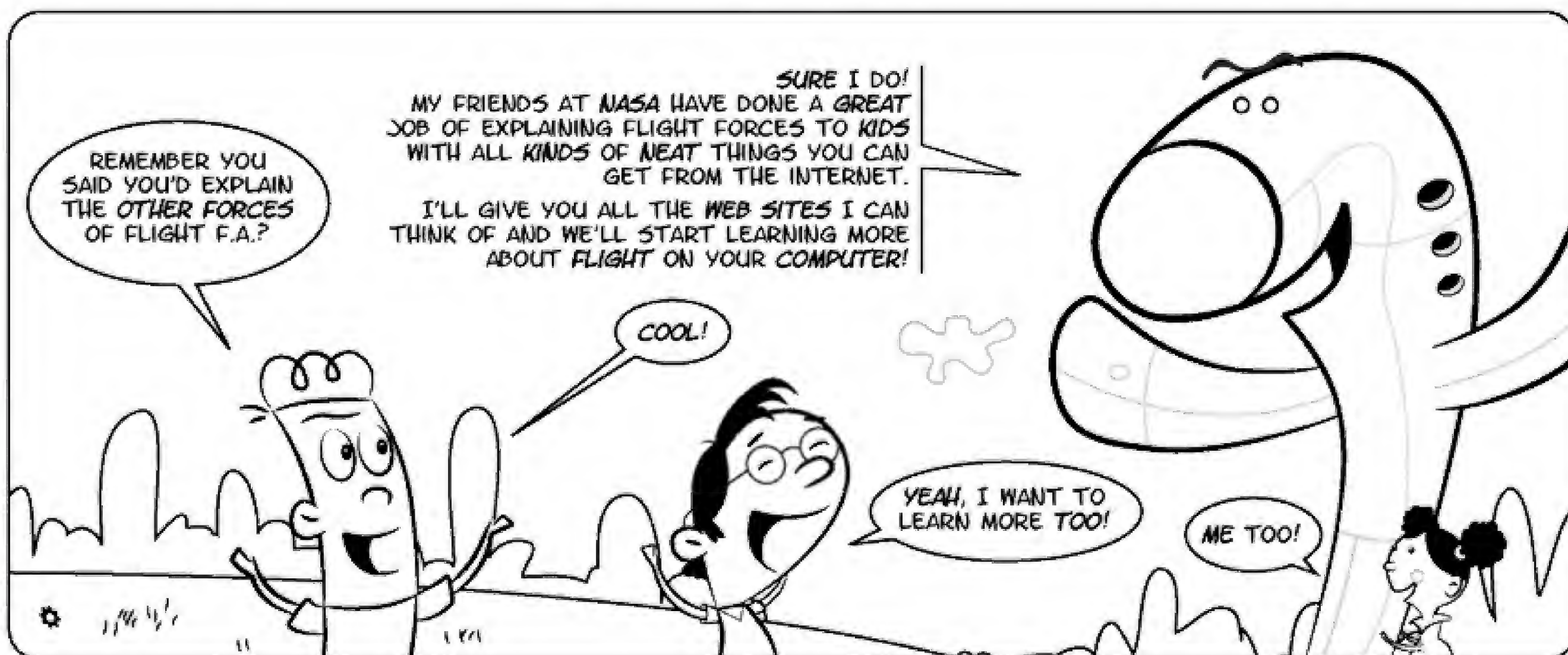
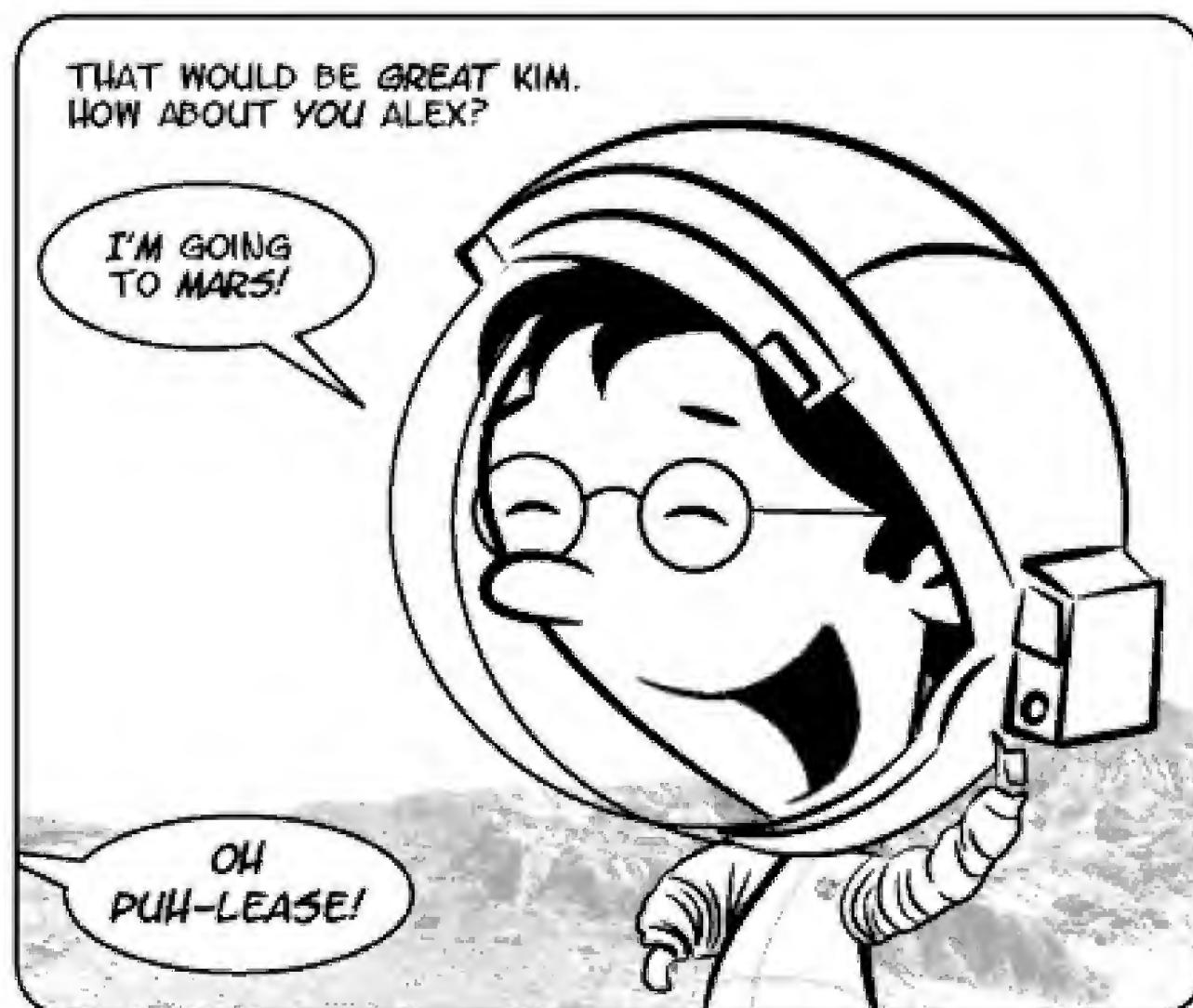
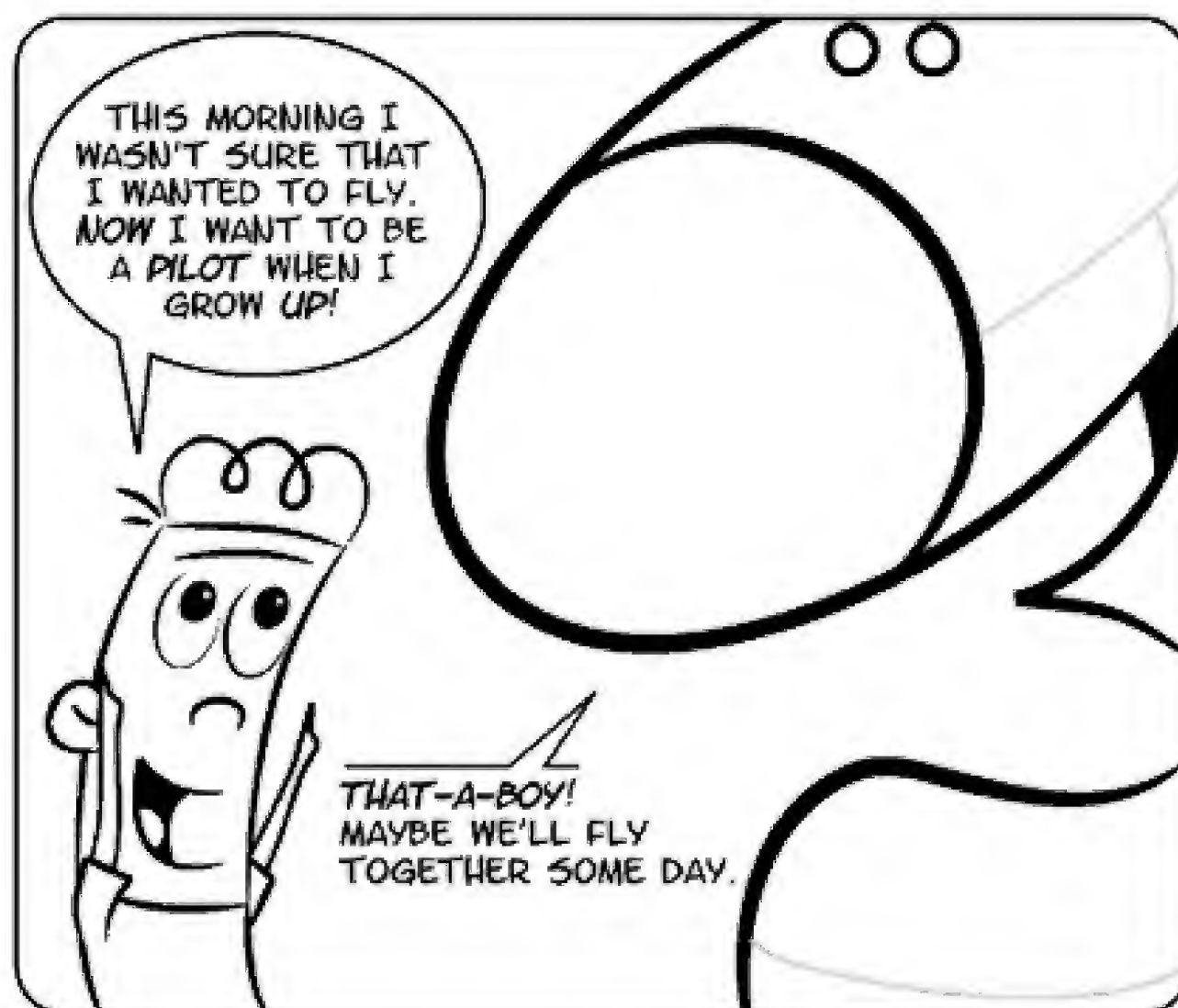
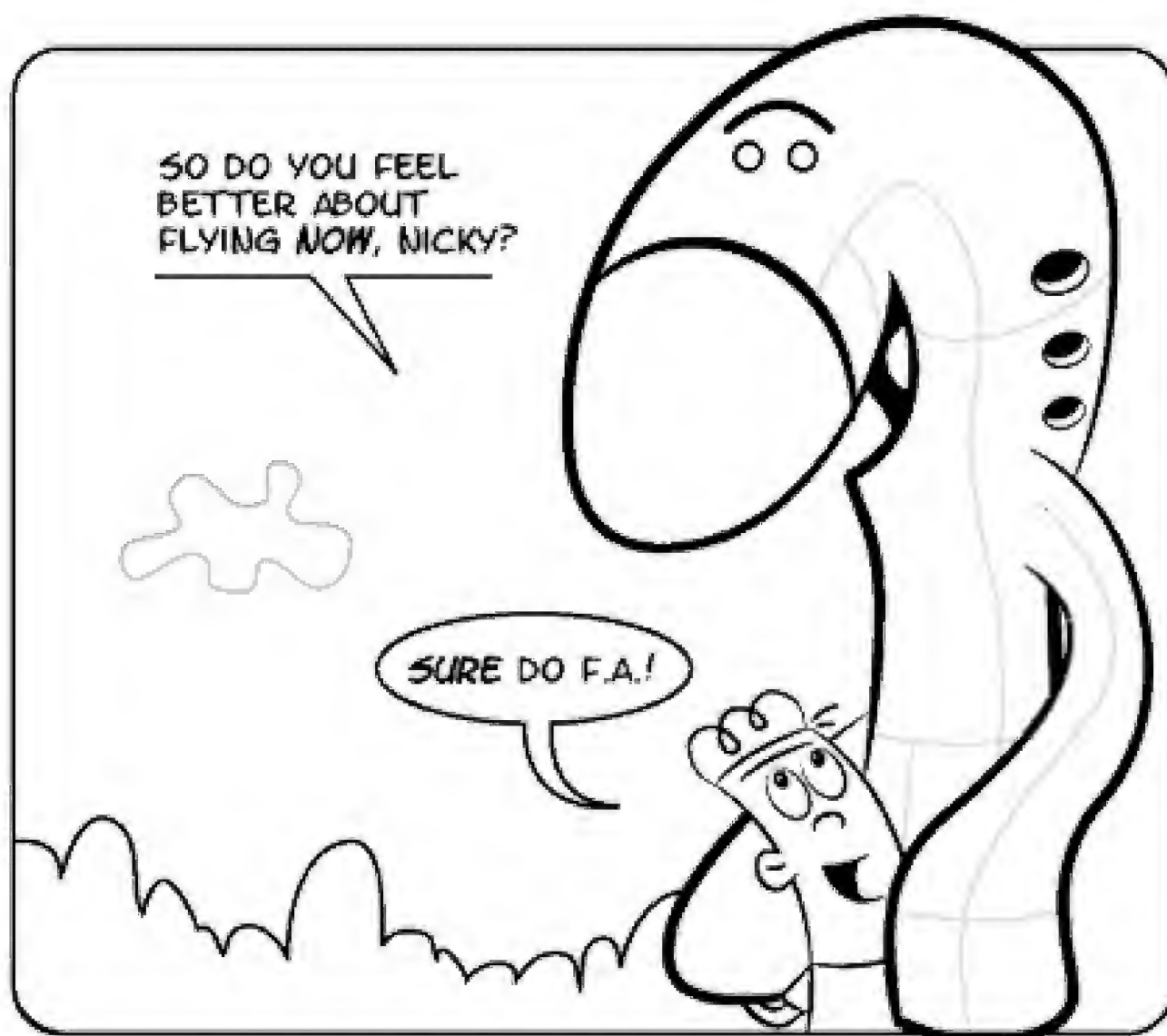
NASA STILL DOES A LOT OF WORK
ON AIRPLANES, ALEX, ESPECIALLY
AT LANGLEY RESEARCH CENTER.

NASA ENGINEERS ARE WORKING
TO MAKE PLANES SAFER,
STRONGER, QUIETER, FASTER,
AND EASIER TO USE.

F.A.,
DO YOU THINK THAT
SOMEDAY WE MIGHT
FLY AIRPLANES?







NASA has many web sites that can help you to learn more about flight. Some are listed below and others can be found by doing a search on the web for the topic that interests you most!

Resources for Students and Educators of Grades K -12

Aerospace Technology Education Programs
<http://www.aero-space.nasa.gov/edu/2aero.html>

Aerospace Education Services Program (AESP)
<http://www.okstate.edu/aesp/AESP.html>

NASA Explorer Schools
<http://www.nsta.org/explorerschools>

NASA Student Involvement Program (NSIP)
<http://www.nsip.net>

NASA Explores
<http://NASAexplores.com>

NASA Educator Resource Network
<http://spacelink.nasa.gov/ern/>

**NASA Revolutionary Vehicles
Student Competition**
<http://avst.larc.nasa.gov/competition.html>

Other web sites that may interest all age groups

The NASA Home Page Address
<http://www.nasa.gov>

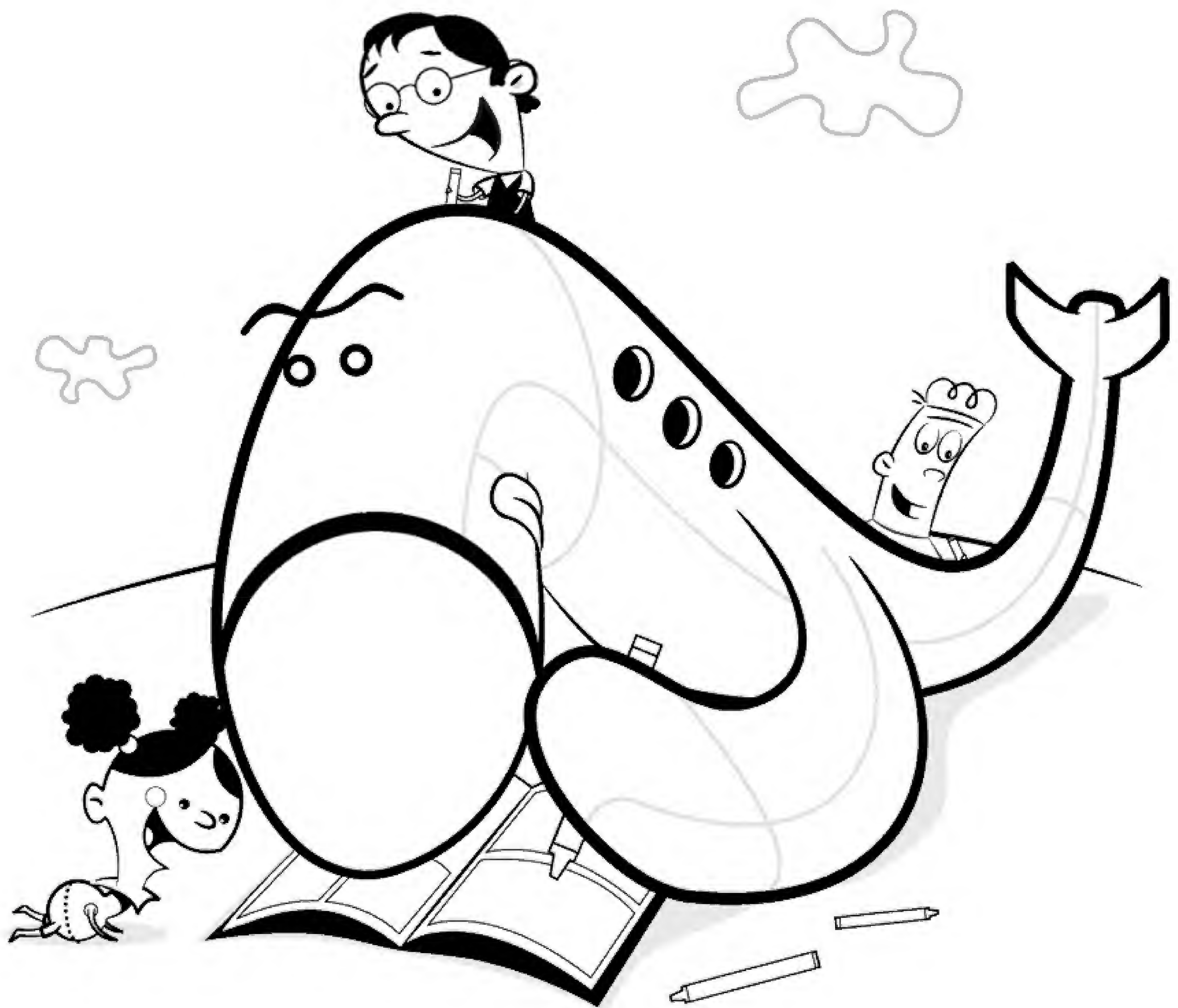
NASA's Education Home Page
<http://education.nasa.gov>

NASA Langley Research Center
<http://www.larc.nasa.gov>

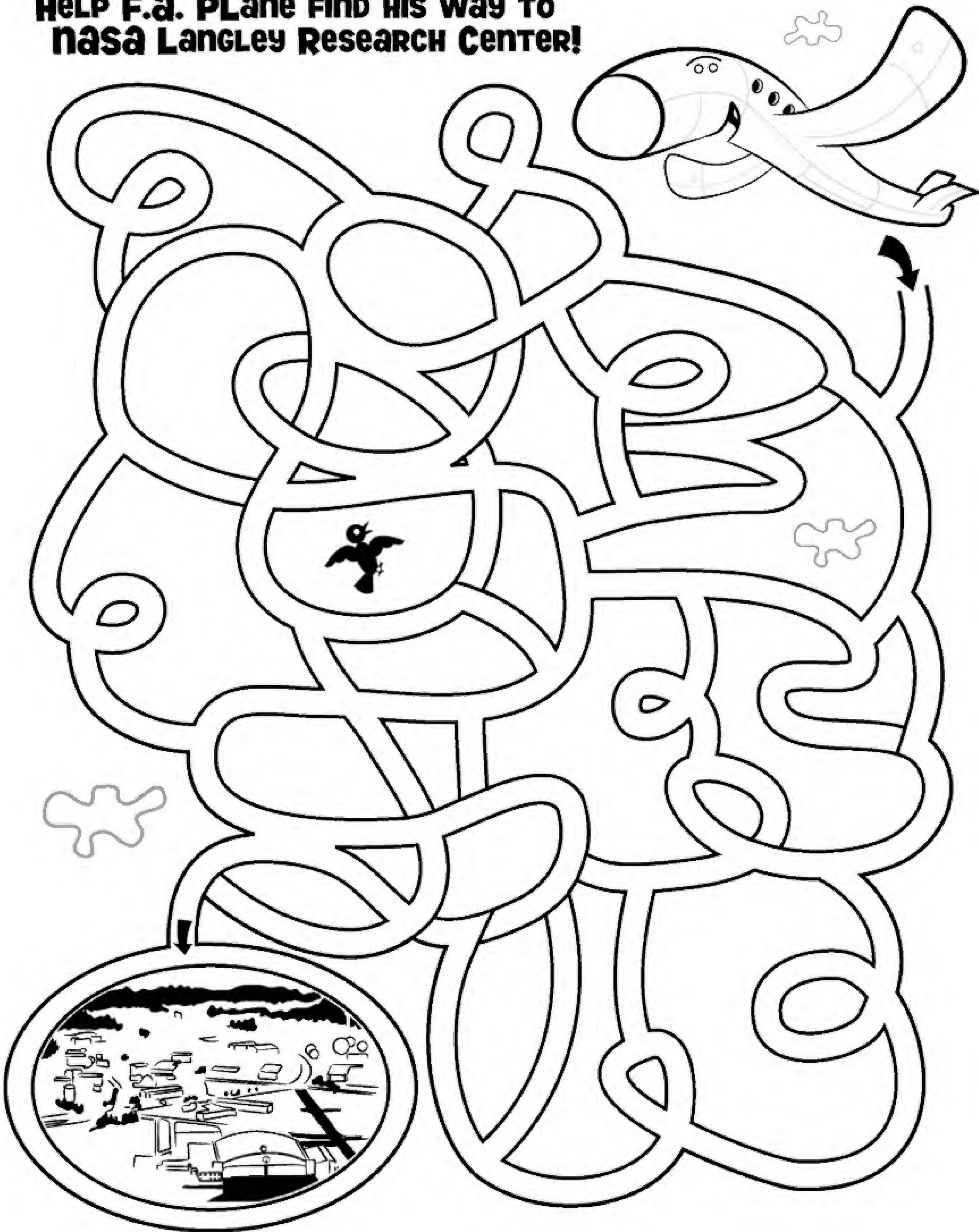


HEY KIDS!
TURN THE PAGE FOR
COLORING AND GAMES!

F.A. PLANE AND FRIENDS!



**HELP F.A. PLANE FIND HIS WAY TO
NASA LANGLEY RESEARCH CENTER!**







7.



3.

2.



9.

10.

11.

12.



13.

14.

15.



24.

23.

22.

21.

16.

19.



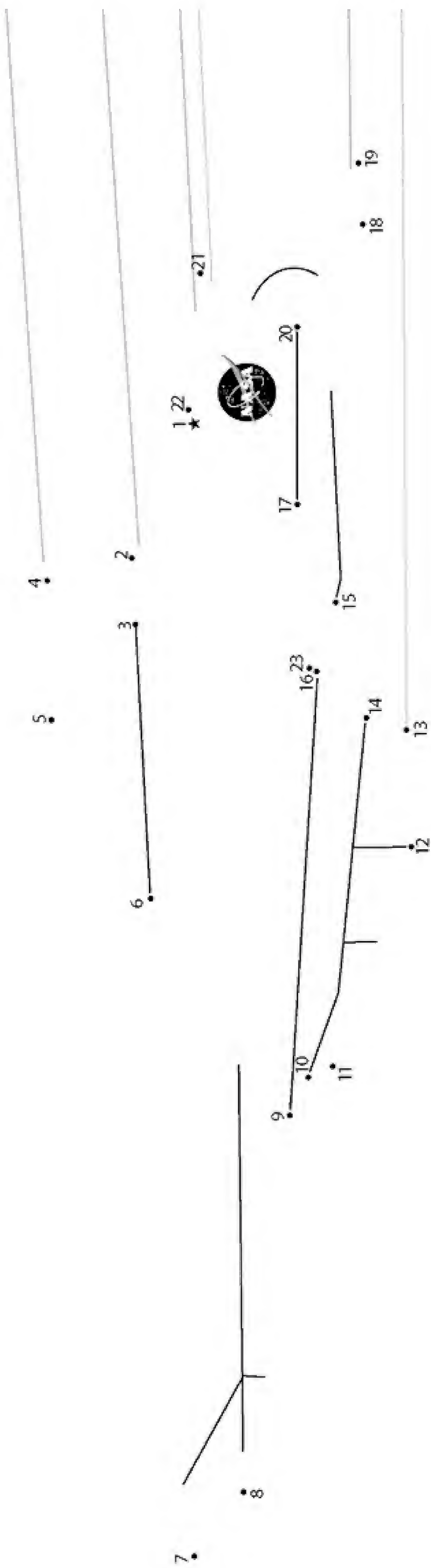
20.

18.

THE BLENDED-WING BODY AIRCRAFT
**FOLLOW THE NUMBERS TO
CONNECT THE DOTS!**

KIM!





THE HYPER-X PLANE

**FOLLOW THE NUMBERS TO
CONNECT THE DOTS!**

NICK!





WORD Search!

Find the words below that have been hidden in the grid on the right!

FLYING
SUPERSONIC
FLIGHT
NASA
PILOT
HYPERSONIC
BIPLANE
LIFT
ASTRONAUT
XPLANE

A	E	A	H	T	R	T	I	E	S	R
G	L	S	E	E	R	I	H	S	S	O
I	I	T	N	L	O	X	Y	L	U	E
I	F	R	E	T	P	P	P	X	P	X
P	T	O	A	P	I	L	E	H	E	L
C	S	N	C	P	L	A	R	S	R	P
F	Y	A	R	N	O	N	S	O	S	A
L	F	U	H	A	T	E	O	T	O	O
I	X	T	R	S	N	A	N	T	N	C
G	S	A	A	A	T	E	I	P	I	P
H	S	I	N	I	T	X	C	S	C	O
T	B	I	P	L	A	N	E	X	O	A
L	R	I	P	P	L	L	A	F	N	L
A	R	O	R	C	G	L	C	F	E	G
F	L	Y	I	N	G	S	E	I	E	T
C	T	T	N	L	Y	S	Y	U	G	L

KEY:

A	E	A	H	T	R	T	I	E	S	R
G	L	S	E	E	R	I	H	S	S	O
I	I	T	N	L	O	X	Y	L	U	E
I	F	R	E	T	P	P	P	X	P	X
P	T	O	A	P	I	L	E	H	E	L
C	S	N	C	P	L	A	R	S	R	P
F	Y	A	R	N	O	N	S	O	S	A
L	F	U	H	A	T	E	O	T	O	O
I	X	T	R	S	N	A	N	T	N	C
G	S	A	A	A	T	E	I	P	I	P
H	S	I	N	I	T	X	C	S	C	O
T	B	I	P	L	A	N	E	X	O	A
L	R	I	P	P	L	L	A	F	N	L
A	R	O	R	C	G	L	C	F	E	G
F	L	Y	I	N	G	S	E	I	E	T
C	T	T	N	L	Y	S	Y	U	G	L